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THE MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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Agricultural Calendar.

FARM WORK FOR JULY.

We have but few preliminary observations to make in regard to farm work during this month. Everybody knows that it is a period of incessant labour, and that its manifold duties require the putting forth of all the energies of the field hands.—The backwardness of the present season is such that the cultivation of the corn cannot be suspended without loss in most instances even during the time of harvest, and this fact alone imposes double labours upon the field hands, wherever the force is limited as in most cases it is. But whatever is to be done it is a wise economy that it should be done promptly and well, and if additional hands are needed it is better they should be employed than that the growing crops should suffer from neglect. The harvest *must* be got in and the hoed crops, corn, potatoes, tobacco, &c., must be cultivated, and it will not comport with the best interests of the farmer or planter that the one species of work should be delayed for the sake of the other. All the absolutely requisite labours of the farm at this late season should be carried on simultaneously; for the extra outlay demanded will be amply compensated by the superiority of the crops that are yet to mature. In portions of Maryland, and in Virginia, also throughout the South, harvest is over, but such as have not done harvesting from any cause should hasten to do so, that their energies may be directed to other work now pressing upon them. We throw out the following hints and suggestions as to work for the month.

Harvesting.—The chief point to be remembered in harvesting grain is that it should be cut before it becomes fully ripe, or in other words, just as soon as the berry has passed from the milky state into that resembling tough dough when pressed between the fingers. All grasses, in which of course we include clover, should also be cut when the flowers are par-

tially faded, and before the seed forms, as the exhaustion of the soil will be lessened thereby, whilst the quality of the hay will be improved.

Cultivation of Corn.—See that the cultivators are busily employed among the corn rows, harvest or no harvest, until the plants are in a condition to be laid by permanently. Use the hoe freely about the hills to lighten the soil and free it of all grass and weeds, and do not suspend operations in consequence of dry weather, for it is by constant stirring of the soil that it is enabled to extract moisture from the atmosphere. The dews and vapours cannot of course penetrate a compact surface, but are lost by the action of our July suns to the growing plant, unless these sources of supply are absorbed by a soil which is constantly kept light, loose and friable, as all corn ground should be, and without which care, drought may set in and injure the plants beyond the hope of subsequent recovery.

Broadcast Corn.—An acre or two of corn broadcasted will be found of decided advantage, for additional forage. The ground should be made very rich; plough deep, pulverize well and sow early in the month. Sow not less than three bushels of seed to the acre.

Hay Making.—Clover and orchard grass will have been harvested by this time. The red top—Herd's Grass—will now be fit for the scythe.—Timothy requires peculiar treatment. It must not be cut when in blossom, as other grasses, but makes the best hay, after the seed is formed, and is full in the milk. It will then be more nutritious and heavier. Do not mow it close to the ground—leave four inches of stubble. This prevents the destruction of the crowns of the tuberous roots, and so maintains a good stand on the ground.

Buckwheat.—Have ground ready, and put in from the 10th to the 15th of the month. It proves a great convenience to the farmer to be able, at so late a period, to make up deficiencies in his principal crops, by sowing buckwheat—a grain easily grown, and very good for stock feeding—and delicious, when ground into meal, for buckwheat cakes,

as you all know. Plough well, and manure moderately, with good superphosphates. Sow one bushel of seed to the acre. Cut when one-half of the grain turns black. If the haulm is to be used for forage, cut as soon as the plants come into bloom.

Tobacco.—This month is important to the tobacco grower. Presuming the crop is "pitched," the weeding and early working will now require attention. Hoeing should be done with great care, as many plants are injured by the operation. The early hoeing or ploughing should be deep, so as to encourage the roots to strike well into the ground. Worms this month are not usually so numerous, and are therefore more easily controlled, but they should be diligently destroyed, lest a second crop that comes in August and September, when the plants are well grown, prove too much for you. A flock of turkies, at this time, will keep them under.

Fall Potatoes.—Keep the soil free of weeds and perfectly loose and open—well cultivated and hoed. They will not thrive well in a close, compact soil. If the land needs fertilizers, give them a mixture of 10 bushels of wood ashes, 1 bushel of plaster, and 1 bushel of salt, which scatter over the hills—this for one acre.

Fall Turnips.—Preparation for seeding the usual crop of Fall turnips should be made in due season—it should be completed by the end of the month, or by the first week in August. It is a good practice to sow during the last week in July, as early sowing gives an opportunity for reseedling, if the plants should happen to be cut off by the fly. Supposing the land in proper condition, there is nothing better for producing a good crop of turnips than a mixture of super phosphate of lime, wood ashes and salt—250 pounds per acre. If sowed broadcast 1 pound of seed to the acre will be ample. If seeded in drills, a less quantity will suffice.

Millet.—Though late in the season, the seed may be sown up to the 10th of the month. A few acres of millet will prove serviceable wherever the hay crop is short. When for hay, sow one bushel per acre—when for grain, three pecks. Apply 20 two-horse cart loads of well rotted stable manure or 250 pounds of ammoniated phosphate. Cut when about one-third of the seed begins to turn yellow. If cut late the seed is apt to shatter badly.

Peach Trees.—During this month examine your peach trees to ascertain whether the worm is at work about the crown of the roots. The presence of gum will indicate their whereabouts—as soon as the hole is found take a strong wire and follow the channel under the bark till it is destroyed. A sharp penknife is however, in our opinion, to be preferred, as the channel may be laid entirely bare

without serious injury to the tree except in cases where the worm has succeeded in girdling it.—Many a fine peach orchard might be saved by taking this precaution. Scoop the earth away from the stem of the tree and sprinkle in the hollow so formed a mixture of unleached ashes and refuse salt at the rate of half a peck of ashes to pint of salt.

Budding and Inoculating.—Pears, Plums, Cherries and Apricots may be budded or inoculated towards the close of this month.

Ruta Baga Turnips.—These may still be seeded during the first week of July. Those that are already in the ground, if far enough advanced, should be kept clear of weeds, and the earth well stirred.

Wet Lands.—Drain these as speedily as possible that they may be got in good condition for fall ploughing.

Caterpillars.—Examine the fruit trees for caterpillars, and remove the nests now forming, and burn and otherwise destroy them.

Sheep.—Provide a trough under cover in the pasture, and spread over the bottom of it three times a week as much tar as will cover it. Over the tar sprinkle salt. In getting at the salt the sheep will smear their noses with the tar, and thus prevent the fly from laying its eggs in their nostrils. During the summer months stock of all sorts should be provided with plenty of pure water, shade and salt, in their pasture.

TO DESTROY INSECTS.

The Boston *Journal of Chemistry* says that hot alum-water is a recent suggestion as an insecticide. It will destroy red and black ants, cockroaches, spiders, chintz-bugs, and all the crawling pests which infest our houses. Take two pounds of alum, and dissolve it in three or four quarts of boiling water; let it stand on the fire until the alum disappears; then apply it with a brush, while nearly boiling hot, to every joint and crevice in your closets, bedsteads, pantry-shelves, and the like. Brush the crevices in the floor of the skirting or mopboards, if you suspect that they harbor vermin. If, in whitewashing a ceiling, plenty of alum is added to the lime, it will also serve to keep insects at a distance. Cockroaches will flee the paint which has been washed in cool alum-water. Sugar-barrels and boxes can be freed from ants by drawing a wide chalk-mark just around the edge of the top of them. The mark must be unbroken, or they will creep over it; but a continuous chalk-mark, half an inch in width, will set their depredations at naught. Powdered alum or borax will keep the chintz-bugs at a respectable distance, and travellers should always carry a package of it in hand-bags to scatter over and under their pillows in places where they have reason to suspect the presence of such bed-fellows.

GARDEN WORK.

GARDEN WORK FOR JULY.

We have no suggestions to offer this month, as the chief work to be done is to push forward the crops that are already in the ground. As some of the earliest crops have been removed, the first attention should be to clearing off the beds on which they grew, and preparing them for subsequent use. We usually have a dry time in July, hence water should be provided, to refresh the drooping plants, some sorts requiring more water than others.—Rich composts should be used freely. Such seeds as have ripened ought to be gathered, dried in the shade and put safely away. The work to be done is as follows:

Planting out Cabbage Plants.—After the soil has been liberally manured and thoroughly spaded and raked, choose a moist, cloudy day for planting out cabbage plants for fall and winter use. The Flat Dutch and Savoy should be preferred for this purpose.

Cucumbers for Pickles.—Prepare a bed and plant out cucumber seed for pickles.

Cauliflower Plants.—Set these out on a moist day.

Endive Plants.—These plants may still be set out and fresh beds seeded at intervals of a week for succession.

Melons for Mangoes.—Prepare a bed and plant melon seed for mangoes during the early part of the month.

Dwarf Beans.—Choose a shady part of the garden and continue to sow at intervals of ten days dwarf beans. Water the plants occasionally as soon as they appear above the surface, and invariably choose the early morning or after sunset for this purpose.

Small Salading.—Sow the seeds of small salading at intervals of ten days for a continuous supply.

Setting out Celery Plants.—Celery plants for the principal crop should now be set out.

Turnips.—It is too early to plant turnips, but the ground should be prepared so that seeding may commence during the last week in the month or early in August. Make the soil rich, dig it deep and sow broadcast or in rows. The purple top turnip is the best for family use.

Ruta Bagas.—This crop may still be seeded from the 1st to the 10th of July. It is a hardy root, and as a spring vegetable is exceedingly nutritious and deserves to be brought into more general use.—The cultivation is in every respect similar to that required for the white turnip.

Lettuce.—Set out lettuces to head. Water well in dry weather either in the morning or the evening, the latter time being preferable. Sow seed for succession every ten days.

Spinach.—Get ready a bed for spinach for fall use. A few drills will be sufficient for this purpose. The ground must be made rich and should be spaded deeply and thoroughly broken up.

Radish.—Sow the seed of the turnip rooted radish occasionally through the month.

Leeks.—Set out leeks.

Pot and Medicinal Herbs.—Slips of all kinds of pot and medicinal herbs may now be set out to form rooted plants. To facilitate their striking roots set the slips in well prepared ground in a shady situation, choosing a soil that is rather moist in preference to one that is dry.

Peas.—Sow towards the close of the month a few rows of garden peas for a late crop. Choose a shady place for the bed and water the young vines well and frequently after they have made their appearance.

Savoy Cabbage Seed.—The seed of this fine cabbage may be sown in time for a winter crop up to the 10th of this month.

Destruction to Ants.

The Germantown *Telegraph* says:—The following modes are said to be excellent to get rid of ants; but whatever may be their merits, they are not hard to try, when the warm weather shall bring the pests upon us in billions:—Entrap them by means of narrow sheets of stiff paper, or strips of board, covered with some sweet sticky substance. They will then be attracted and get stuck fast.—When you have caught a goodly number you can kill them and set the trap again. Or lay fresh bones around their haunts; they will leave everything else to attack these, and when the bones are well covered with them they can be dropped into boiling water. If you wish merely to drive them away (with the prospect of having them settle elsewhere within your own borders) a few spoonfulls of coal oil put into their retreats, or a few slices of raw onion buried there, will be taken by them as a strong hint to migrate. If ants are troublesome in the pantry, or other parts of the house, wet a sponge with sweetened water, and when a large number of ants are in it, throw the sponge into hot water and squeeze it out. Wet with sugar and water again, and go on so.

A little girl was once asked the following question: "What is faith?" She replied, "Doing God's will and asking no questions."

For the Maryland Farmer.

GRASS SEEDING.

There is scarcely a more important branch of the whole routine of husbandry than that of sowing grass seeds, and yet there is, perhaps, none more carelessly or more imperfectly performed, or more neglected. In many districts seeding is entirely neglected, the land is cropped until it ceases to pay for cultivation and seed, when it is abandoned, or "laid by," or "turned out," as it is called in different localities, and the land allowed to grow whatever it will spontaneously. Land, treated as intimated, rarely produces a growth of anything valuable, or even enough vegetation to shade it sufficiently to resuscitate it perceptibly for years.

The injudiciousness of such management is too apparent, and too well known to need a comment. It will be my purpose, in the following, to treat more particularly of the defects in seeding, as it is usually performed, and some of the consequences. I find, in the South particularly, that there is little regard paid to the purity, weight, age, or plumpness of grass seeds: if the price is low, the characteristics enumerated, all of which are very important, are considered secondary to the price, and the natural result of such indiscretion, and such indifference on the part of the culturist, to his real interest, has been, in many instances with which I have been familiar, the purchase of seed that was so old that it had, in a greater or lesser degree, lost its vitality; the purchase and application to the land of a variety of noxious weed seeds, and finally a failure to obtain a set of grass, the total loss from which, everything considered, is often greater than that resulting from neglecting to seed altogether: for, when the cost of the worthless seed, of its transportation, and application to the land are estimated, and the permanent injury to the whole farm, as well as the particular field seeded, by the introduction of ruinously noxious weeds is considered, no seeding would have been more profitable.

An expose of the business of mixing seeds and other dishonorable transactions of those who cater to the "*cheap seed*" farmer, might be very useful to that class, but I shall dismiss the subject with one word, *beware*, and "*a word to the wise is sufficient.*"

I have found it very profitable, after having carefully selected the purest, freshest, brightest and heaviest seed in the market, and purchased it, to sample it carefully, and test it by sprouting it in a manner that I could detect every seed that failed to vegetate, and I have made it a regular practice to do so, and have, on several occasions, found about the same proportion in several samples from

the same lot, which had no vitality, and another portion of it that would in every instance, be two to three days longer in germinating than the balance.

I am well satisfied that the seed was mixed with some old seed, and some older still, yet all had a bright appearance and was free from must. The greatest care in the selection of seed will be found to pay.

SOWING.

No branch of my subject is more important or more imperfectly understood than this generally.—In portions of New York and New England, however, for a period of over fifty years, this branch of farm labor has reached a deserved degree of attention.

I have known a number of farmers who would trust no hireling, however faithful and trustworthy, with the sowing of grass seeds.

I well remember my early lessons in seeding given by my father, who was a very superior seedsmen, yet he was never satisfied without sowing the land twice over, sowing the second time at right angles with the first. He would not allow grass seed to be sown when there was wind; and I well remember being taken to the field to sow grass seed before dawn, and waiting for light by which to see the signal poles, as it was usually calm at that time, but the wind frequently rose to the extent that we were obliged to discontinue the work in less than an hour. I have often been astonished in traveling in rural districts, to see how carelessly this work, which I was taught to perform with such scrupulous care and precision, is conducted by many farmers.

A numerous force of boys and heedless men are entrusted with the precious, costly seed, and directed to sow it on a certain field, which, if they do, and keep it within the enclosure, they seem to think they have done pretty well. It is very common for one to sow double the amount of seed that another does, for portions of the land to receive double, triple, and quadruple the proper amount of seed required, and for other portions to receive none.

Where the seed is too thick, the excess of grass plants on a given area, causes all to fail of proper development, and results not only in the loss of the seed, but in the loss of the crop. Portions receiving none will produce a spontaneous growth, generally of worthless weeds, which are not unfrequently allowed to ripen their seed, and re-seed the land on which they grew, also contiguous land, and often to a great extent, and occasioning a great increase of labor in the tillage of subsequent hoed crops, and materially tending to deterioration in the

value of the land. Few farmers themselves are, nowadays, capable of properly sowing grass seeds by hand, and competent hirelings are scarcer still; but, fortunately, a variety of seeding machines have already been invented and put in the field, to be worked in various ways, some of which are, if judiciously used, superior in their execution to the best hand seeding. Some persons not thoroughly familiar with seeding machines may be surprised that I admit their superiority to the most skilled hand, to such I would say, without boasting, that I do not know of my superior as a seedsman, and I confess that the seeding machine used by Bickford and Huffman on their grain drill, and on the Wisner sulky rake, is capable, when properly used and when equipped with the wind screen, of sowing both timothy and clover seed more evenly, and more uniformly than I can sow by hand under the most favorable circumstances. The wind screen referred to is a device recently patented by the writer, and a number of them are already in use, and are claimed by farmers using them to be so effective that they are now able to sow their grass equally as well in a violent gale as in a calm.

The screen is durable and inexpensive, costing but \$3, and may be had at all the agricultural implement houses in Baltimore, and at an early day, elsewhere throughout the country.

With the use of the seeding machine, with the screen appendage, mounted on the wheeled horse-rake, a skillful driver may seed with clover or timothy, in the best manner, an area of twenty acres, in twelve hours.

This, in this age of demoralized, worthless farm labor, I consider one of the most valuable labor-saving and labor executing machines ever supplied by the farmer's friends, the mechanic, and the inventor.

In the selection of seed, the nose is scarcely a less important organ than the eye.

Seed having a musty smell is not reliable, and full weight and a bright appearance are essential characteristics. Every farmer having a horse rake, should have a seeding attachment; the best, with the screen attached, costs but \$13, and will save its cost in one days use. Farmer, if you feel that you cannot afford to purchase the best sulky rake with seeding attachment, I would advise you to sell enough of your needless fences to buy one, for the fence you cannot afford to maintain, and the rake and seeder you cannot afford to do without.

J. WILKINSON,

Consulting Agriculturist, Baltimore, Md.

(TO BE CONTINUED.)

The Maryland Farmer \$1.50 a year.

Translated from the French for the Maryland Farmer.

AGRICULTURAL SOCIETIES.

In regard to the effort which the State Maryland Society is now making to bring closer together in one strong bond of union all the Agricultural Societies of the State, and the good such a union might accomplish, I notice the following in *L'Agri-cole*, from *Revue d'Economie Rurale*.

There exists in the United States a central department which procures the best seeds for distribution among cultivators who desire to travel the road of progress: this is a feature of great social importance, for the good seed it is impossible to doubt, will increase the gross product of the soil and thus largely contribute to the increase of the public fortune.

Such a department exists not in France: cultivators manage their own affairs, which is preferable, from all points of view: it is always easy to proceed through association: agricultural societies and the meetings of the people would do well to take the initiatory steps in this matter: in several sections these societies buy animals for reproduction and re-sell them to breeders: why not do the same with seeds which are reproducers? Agricultural societies have correspondents in all parts of France, they find in some measure in each department co-laborers perfectly disposed and ready to render reciprocal services: it would be easy by such means to introduce everywhere good seeds of grain, forage plants, vine stocks, fruit trees, &c.

Agricultural societies live too much a life of isolation, and do not inter-communicate enough: it is in learning what transpires in other places that examples are found: it is by creating relations between localities that we end in establishing comparisons and ascertaining what is best adapted to our own section: now these organizations are excellent mediums for the institution of such relations which could not fail to give the most advantageous results: we call to this feature of organization the attention of the most active and intelligent members of these societies: there is in the course we have indicated a mine of inexhaustible wealth for the future: a fruitful source of education from which might flow a mighty stream of improvement. *

WORMS IN OATS.—Two large spoonfuls of strong wood ashes applied on the top of the earth in a six-inch pot, and then water to take the strength down through, I think the worms will cease from troubling. Be careful not to have the ashes touch the plants where applied. So says a correspondent in the *Country Gentleman*.

ADDRESS

OF

Gen. SAMUEL JONES.

DELIVERED BEFORE THE MARYLAND HORTICULTURAL SOCIETY, ON THE 19th OF MAY.

Mr. President and Gentlemen of the Association:

I was reluctant either to decline or accept the invitation to address the Society at this time—to decline—because it is the obvious duty of every member to contribute his mite towards its success, and if all hold back, because of some apprehension that what he may have to exhibit, or say, may not be the best possible, we will accomplish nothing. I was unwilling to accept because the time allowed me was so brief that my various duties did not permit me to do justice either to the subject, the Society, or myself. But your invitation was so pressing that hardly any escape was left me. Hence it is that I venture now to say something to the Society.

It would be out of place in one who, like myself, is not a practical horticulturist, to enter into the consideration of the practical details of horticulture, in the presence of those who, in the beautiful flowers on exhibition, have given the best possible proof that they thoroughly understand their art.—I will, therefore, speak generally of horticulture in its broadest sense.

The word horticulture, as we all know, is derived from two Latin words *hortus*, a garden, and *cultura*, culture, and means, therefore, garden culture, or the art of cultivating gardens. The word garden, also, has a very wide signification, embracing alike the humble plot of ground appropriated to the cultivation of fruits and vegetables, the neat and gracefully ordered plots, for the cultivation of beautiful flowers that gladden the eye, and perfume the air—the orchards, with their varied and delicious fruits, and those grand and magnificent gardens or parks that beautify and adorn the stately residences of the wealthy and the palaces of kings, or affords healthful recreation and enjoyment, as well to the toiling millions as to the wealthy few of great cities.

It has even a wider signification. It embraces whatever is most fertile and thoroughly cultivated in any country—localities which we call the "Garden Spots" of that country—and even whole States that are in the highest state of cultivation.—It is in that sense that Shakespeare uses the word when he refers to

"Fruitful Lombardy,

The pleasant garden of Great Italy"

Horticulture then meaning garden culture, and garden being so comprehensive a term, you will see what a wide field of labor is that of the horticulturist, broad enough to embrace every grade of excellence, from the cultivation of the vegetable garden to the real artist whom we call a landscape gardener.

In the more restricted and usually accepted sense, horticulture is that branch of rural economy which consists in the formation and cultivation of the vegetable, fruit and flower garden. On one side it is allied to Agriculture, from which, however, it is distinguished by the nature of its products, and by the smaller extent and greater complexity of its operations, on the other, in its processes of em-

bellishment, it approaches the arts of the landscape gardener and forester, in which horticultural skill is subordinated to the principles of cultivated taste.

If antiquity can add dignity to an occupation, none may claim pre-eminence of horticulture. It is older than the common law, so old that not only the memory but the faintest tradition of men runneth not to the contrary. It is, too, a calling specially favored by God, who planted a garden in Eden, filling it with every tree that is pleasant to the sight, and good for food, and in it placed our first parents to dress it, and to keep it.

And from that day to this, in every country which has attained to any eminence in the arts and sciences horticulture has flourished with them. And it is worthy of remark, that it never attains even moderate excellence in countries which have not attained a high degree of cultivation. In both sacred and profane history frequent mention is made of gardens and garden culture, though with no minuteness of detail. The earliest recorded history of Egypt represents the whole vast valley of the Nile, from the Cataracts to the shores of the Delta, as in the highest state of culture, and dotted over with beautiful gardens. But it was not until generation upon generation had passed away, leaving no written record of their history, but leaving the most imperishable evidence in grand and magnificent temples and pyramids that they had attained a high degree of scientific culture.

And here I may be permitted to digress for an instance to say, that the more we knew of past ages the more are we disposed to suspect that we are not in all things, so far superior to the people of remote antiquity as we are accustomed to assert.

We boast that we have gone far beyond the ancients in all of the arts and sciences of life. And yet the more we pry into antiquity the more evidence do we find of the existence of arts that we have never acquired, and which are called the lost arts. Our poets, sculptures, painters and architects, strive, and strive unsuccessfully, to equal the models of beauty left to us by the ancients.

We congratulate ourselves that we live in an age when engineering skill has devised machines of wonderful ingenuity and power—that we have steam elevators that can in a few hours do the work of many days of as many hundred men. And yet those people of whose history we are ignorant, have left vast monuments of stone, transported hundreds of miles, and piled huge block upon block, to a dizzy height, the weight of the smallest of which would crush our boasted grain elevators like an egg shell. With all our engineering skill we cannot say by what mechanical means these huge piles of stone were transported and raised to their present positions.

There is evidence that horticulture was highly esteemed and most successfully practiced in Asia, creating the "earthly paradise of Sardis," the marvelous hanging gardens of Babylon, and adorning the environs of Jerusalem with beautiful gardens, the names of which are sacred. Jerusalem's magnificent King—"the wisest man the world ere saw," was a patron of the art—and "made orchards," and "delighted to dwell in gardens," and planted the vineyard of Baalhaman. From Egypt horticulture passed with other arts into Greece, and flourished there side by side with them, during the most polished period of the history of that most highly cultivated people.

Imperial Rome, rich with the spoils of a conquered world, opened to the horticulturist the widest field for the exercise of his art, in the embellishment of the villas and palaces of the wealthiest and most luxurious of patricians and emperors.—It was swept away and lost with other arts, by the deluge of northern barbarism that over ran and devastated the fairest portion of the earth.

It emerged from the long nights of the dark ages, but more slowly than the other arts, and in the crudest and most imperfect state. The cultivation of even the most ordinary garden fruits and vegetables advanced westward very slowly, and it is said was scarcely known in England until the time of Henry VIII. Under the patronage of gentlemen of wealth and cultivated taste it grew with the increasing prosperity of the country, but very slowly.

Something more than individual effort was needed, to advance and elevate it, and that need was supplied by the liberality and public spirit of a great city. In 1805 the Horticultural Society of London was organized, and soon thereafter the Calidonian Horticultural Society of Scotland, and these were quickly followed by a multitude of lesser societies in various parts of the kingdom, an impulse was given to Horticulture which has covered England with innumerable gardens and parks of surpassing beauty. Their utility was soon recognised on the Continent, and societies were formed there, especially in France, and the English style of horticulture previously introduced to some extent, soon superseded the stiff and grotesque styles that until then prevailed. It crossed the ocean, and horticulture is now beautifying and embellishing this country, fostered here as in England, by organized Societies. The Horticultural Society of Massachusetts was the first organized in this country, and here I may mention for our encouragement, that at its first annual meeting there were only 32 contributions, and less than \$200 awarded in premiums. At the annual meeting sixteen years later, there were more than 1400 contributions of fruit alone, and more than \$1300 dollars awarded in premiums. It has gone on prospering in wealth, influence and usefulness. In 1871, \$4,264 were awarded in premiums, and in 1872 the gross receipts of the Society was \$32,249.

Various other similar societies have been formed in other States. New York, Philadelphia, and other cities, have theirs, and now, for the second time, Baltimore has hers.

Wherever these societies have been diligently fostered and made prosperous, they have exerted a most beneficial influence. They collect vast amounts of information as to the properties of all of the products of the earth, which pertain to horticulture—facts and theories as to the physiology of plants, of the best mode of cultivating and propagating them—the particular properties of soils, and fertilizers best adapted to their wants—the due proportion of heat and moisture for each individual variety of plants, and a multitude of other facts valuable to the horticulturist. They create in the community interest in the subject, and cultivate and refine the taste. These all radiate from the great centres, and are diffused far and wide through the country, and their beneficial effects are soon made manifest by the improved appearance of suburban and country residences, all classes, who

will derive some benefit, and the bread thus thrown on the water returns to you again, and you find it in your markets in the increased variety and greater excellence of your vegetables and fruits, and your green houses, conservatories and parlors, are adorned with the addition of new varieties of flowers, and the older varieties improved. That has been the result elsewhere. Let us trust that it will be so here.

But we may not hope that this result will follow unless we are diligent and zealous in the cause, and pursue the course best adapted to the accomplishment of so desirable an end. Those of us who are not already proficient must educate ourselves up to the work before us.

The various arts and sciences seem to be mutually dependent one on another. No one of them attains a high degree of excellence without aid from some other. Horticulture, like other arts, borrows its principles from the other sciences. To Botany it is indebted for the facts and theories of vegetable Physiology. Chemistry and Mineralogy supply the absolutely requisite information in regard to soils, manures, artificial heat, light and moisture. To the principles of mechanics, as applied to fluids, we must resort for information as to the best and readiest way of raising and conducting water for irrigation, and ornamental fountains and lakes, and the architect must supply us with the most graceful and ornate structures that may be needed.

Indeed, what is called natural science is now applied to so many of the industrial pursuits of life—to horticulture, agriculture, and all the vast range of the mechanic arts, that there is a constantly increasing demand for its more general diffusion throughout all ranks of society. Hence it is that scientific schools, or schools of Technology as they are called, are springing up all over the country, and scientific education is, in many instances, superseding the old traditional classical course of the Colleges and Universities.

And the great benefits flowing from such scientific education are made manifest at all of the great World's Fairs and Expositions, in the superior excellence of articles produced in countries that foster such education. The great Paris Exposition, for instance, showed France to be so far in advance of England, that the English government appointed a commission to enquire into the cause and suggest a remedy, and the conclusion arrived at was, that it was due to the superior and more general scientific education of the artisans. And England at last awoke to the importance of scientific schools, and now there seems to be a sort of furor in that country on education in general, and especially the scientific.

I have said that Horticulture is closely allied to Agriculture. The same sciences that aid the one aid the other. The same process of analysis that ascertains the best constituent. Elements of soils for the production of Tobacco, Corn, Wheat or Cotton, shows us also which are best adapted to the Peach, the Strawberry, the Tulip or the Rose.

We must not suppose that either Horticulture or Agriculture can attain great excellence without much mental as well as physical effort. The sources of information are most ample. Men of high literary culture and scientific attainments, have devoted much time and labor to the investigation and development of the principles that underly the

subject; and the minute details of the art of cultivation, and the results of their labors, are taught in the schools.

They—horticulture and agriculture—are merely two divisions of labor in that greatest of all industrial pursuits, the cultivation of the earth, which, in the language of Washington is, "the most healthful, the most useful, and the most noble employment of man."

It is the first step in the advance from barbarism to civilization. It is the foundation of national and individual prosperity and wealth. It is the basis on which rest commerce and manufactures, and the various great temporal interests of mankind. If the productions from the cultivation of the earth fail, all else will fail. If it languishes, all other interests are depressed. Its prosperity gives impetus and vitality to all other pursuits.—Witness the interest manifested by the merchant, the banker, the mechanic, in the condition of the crops. Men who scarcely know whether it is the grain, the cob, or the two combined in the whole ear of corn that is planted to produce the crop, or whether the florist produces the rose bush by planting the rose leaf, can tell you more accurately than any farmer in the land, of the crop prospects in this and other countries.

Notwithstanding that it is the foundation of the prosperity of a people, it is the least fostered and most heavily taxed of all other industrial pursuits. The cultivators of the soil are dispersed and isolated throughout the land, and therefore easily imposed on. They have long submitted in patience to unjust and oppressive exactions of government and corporations. They have at last awakened to a knowledge of the strength derived from combination, organization, and unity of action. They have their well organized societies of Horticulture and Agriculture. Their Granges are organizing in every State and county, and sub-division of counties.—They have their Congress—THEIR CONGRESS—not that assemblage some forty miles from here—that assembled in '72 in St. Louis—in '73 in Indianapolis, and last week convened in Atlanta, and adjourned to meet next year in Cincinnati. They meet, not to consider the mere details of Agriculture or Horticulture, but to deliberate on great questions of finance, taxation, transportation, education and others, that concern the whole country. *Now* they respectfully *petition*, but if the organization continues they will soon *dictate* what it shall and what it shall not do. In other words, they will exert a controlling influence in the government itself.

I have been speaking of Horticulture in its widest and most comprehensive sense. We of this Society are more concerned with it at present in its more restricted and generally received sense, as the art of cultivating vegetables, fruits and flowers; thus restricted it affords a field of labor ample enough for the employment of the skill, ingenuity, and enterprise of a very large class of the cultivators of the soil. And to their credit, be it said, they have carried their art to a very high state of perfection.

He who makes two blades of grass grow where only one grew before, is esteemed a benefactor of mankind. How much more is he a benefactor who not only makes vegetables, fruits and flowers grow where none grew before, but absolutely creates, as

it were, new varieties. I knew a skillful florist in California, who never spoke of *cultivating* flowers, but of *making* them, and that too, of different styles and patterns, and shades, just as a jeweler might speak of the works of his hands. Within comparatively a short time, a great variety of most valuable vegetables and fruits have been introduced, and our markets teem now with articles of food, the products of the earth, which we regard as almost the necessities of life, and of which our not very remote ancestors knew nothing.

So, too, the florist, by skillful and scientific cultivation, has added a great variety of beautiful plants, and together with the cultivators of fruits and vegetables, they have multiplied the productions of these several departments to that degree, that the President of the Massachusetts Horticultural Society not long since declared that it had become a most difficult problem to select the best.

Not many years since there were only some eight or ten known varieties of that "Queen of the Garden," the Rose, and they were in bloom but a few weeks in the year. Now there are many hundred varieties, and some of them may be made to blossom nearly all the year.

The "last Rose of Summer" has ceased to be an object of interest, since they bloom through the Autumn and into early Winter.

One of our members, Mr. Feast, has gained great credit and conferred a benefit upon lovers of flowers, by raising and introducing some beautiful and hardy varieties of the Climbing Rose, especially the "Queen of the Prairie," for which, I believe, he received a gold medal from the Massachusetts Horticultural Society.

And here I may say, that it is within the province of the horticulturist to produce medicinal as well as other plants. It is done in other countries, especially in France, to a great extent, and I suggest that it should claim more attention in this country than it has heretofore.

It would be invidious to attempt to draw any comparison between the relative merits of the cultivators of fruits and vegetables, and the florist.—The world cannot by any means spare either.—But at this season the productions of the florist especially attract our attention.

Flowers have been called the poetry of Horticulture. Who can estimate the pleasure derived from them? They give pleasure alike in the cottage and palace. They minister to us in all our varied moods. In our joy and our grief, in our exultations and our worship. They deck the bride at the altar and mark our remembrance and love on the grave. They are borne in our triumphal processions, and adorn our sanctuaries on the festivals of the Church. They give pleasure in a thousand ways that we do not appreciate until we miss them.

I dare say that flowers impart more pleasure to the poor than the rich. Every florist has heard how, not many years since, a London Horticulturist saw in the window of a cottage in the suburbs of the city, a beautiful plant that he had never seen before. It proved to belong to the wife of a seaman, who had brought it from its native clime. The man insisted upon buying it, but the woman would not sell.—It was a present and memento of her husband, who was at sea, and she must keep it until he returned. But the florist would take no refusal,

tempted her with gold, and more gold—until he gained the coveted plant, and soon the lovers of flowers were charmed and dazzled by the beautiful Fuchsia. I doubt if the gold gave the woman as much pleasure as she derived from the plant.

It is, as I understand it, the object of this Society to foster this healthful and most useful art of Horticulture, and disseminate far and wide, the facts and principles on which its success depends. Our success will depend in a great measure on ourselves. If we use proper diligence and energy, and make our Exhibitions attractive and worthy of patronage, they will be patronized, new and active members will join—a spirit of generous rivalry will be aroused, and the Society will prosper and be of lasting benefit to the State.

That such may be the result I most earnestly hope.

LUCERNE.

The *State Agricultural Journal*, Raleigh, N. C., in an article on Grass Culture, gives their readers what they can reliably learn concerning the value, soil, culture, &c., of Lucerne, in that section of country:

Foremost and most valuable among perennial grasses for the South, we think, ranks Lucerne.

It is frequently, of late years, called Alfalfa.—And doubtless many persons have been thinking of Alfalfa, the grass that yields such prodigious crops in California, as something new and unknown to them. We have the highest authority for saying that *Lucerne and Alfalfa, are one and the same*.—Lucerne, then, or Alfalfa, is an old acquaintance with many people in the South. Hon. B. F. Moore, of Raleigh, has been using it for thirty years, and considers it a plant of great value. Dr. Mason, late pastor of the Episcopal Church, in this city, cultivated lucerne and considered it superior to red clover.

Lucerne is a plant of warm climates. It does not grow well in cold latitudes, but flourishes on the lands of our Southern coasts, provided the soil is made sufficiently rich. It may be cut five or six times in one season, and make excellent food for all kinds of stock, whether fed green, or cured as hay. *It must not be pastured*; because stock bite it down so near the root as to kill it. Horses fed on it need no grain except when working, and even then, it is said that one feed of corn each day is sufficient to keep them in good condition. Hogs will keep in good order on green lucerne cut and thrown to them. The roots grow very large and long, sometimes as large as a man's finger, and descending several feet in porous dry earth.

SOIL.

Any kind of soil will produce it—clay, sand, or mixed—provided it be dry and rich.

CULTIVATION.

It may be successfully cultivated broadcast on land that has been kept clear of weeds and grass for several years, and that is also rich, but since grass and weeds destroy lucerne, in its infancy, it is safest to sow it in drills. Let the drills be laid off eighteen inches apart and the seed sowed at the rate of ten pounds to the acre, late in February or early in March. The preparation of the ground should be deep and thorough and the manure used should abound in phosphoric acid, rather than ammonia. Hence, use bone manures liberally in preference to Peruvian Guano. Plow and weed with the hoe the first year, carefully destroying all weeds and grass. You may cut it twice the first year.—In the fall it would be well to manure between the rows. The second spring it will give you a cutting by the last of April, oftentimes by the middle of the month, and then give you four or five other cuttings. It will still be advisable to sweep out the middles occasionally to destroy the grass.

The expense of getting this crop started is considerable, but when once well rooted it lasts ten years, or perhaps even longer.

We omitted to say above that the seeds should be covered very lightly.

The *Practical Farmer* in reply to a correspondent who asks if lucerne is adapted for dairy farms, says:—We have a very favorable opinion of this grass on account of its productiveness, allowing three or four cuttings in one season, its nutritive qualities and also persistent growing, its roots penetrating deeply into the soil, rendering it unaffected by droughts. It is, however, a crop adapted only to a more advanced state of farming than is commonly found here. It requires a very deep soil and a very rich soil, when it will hold its own after being once well set, which will require from two to three years. This is entirely too long for the average American farmer to wait for anything.

The spring is the proper time to sow it, and in drills 12 to 15 inches apart, and at the rate of 10 to 12 pounds of seed per acre. It must be hoed and kept clear of weeds till it comes into profit.

R. Gibson, who formerly had the management of the famous New York Mills herd of Short-Horns, has had more experience in the cultivation and feeding of this grass than any one probably in this country. He recommends it highly.

Lucerne will come in with soiling, steaming food for stock, &c., as another element in 'high farming.'

Subsoils do not germinate seeds or grow plants like surface-soils.

FERTILIZERS.

I have some valuable collections on fertilizers, but time and space will not admit of their insertion here. Suffice, however, to say that manure of any kind, whether it be guano, bone, lime, barn-yard, or what not, will yield much more beneficial results if applied to some green crop to be turned under, such as clover, lucerne, peas, buckwheat, rye, etc. Carbonic acid gas will thus be generated during the period of decomposition, by which means large amounts of oxygen from the air can be appropriated—borrowed for a season, as it were—which, by uniting with the carbon in the decaying vegetable matter, is converted into carbonic acid gas.

Hence, after the application of any fertilizer to land requiring renovation, at least one green crop should be grown and turned under before a crop be taken off; and if two or three green crops be first turned under, so much the better.

I once read of a farmer who, by turning under three crops of pea vines, without the application of any fertilizer, increased the yield of his land from some seven bushels to some twenty-two bushels of wheat per acre.

Clover is generally admitted to be the best crop for turning under, and peas next. Favorable mention has also been made to lucerne, of which, however, I am not now prepared to speak. Rye, oats, buckwheat and Oregon peas will all answer a good purpose.

The Hon. George Geddes, speaking of the benefits of a clover soil, in the Tribune, of March 18, 1874, says to the effect that a field of his has been cropped continuously for seventy-four years, with no other manure than its own crops of clover turned under every fifth year, such clover having been abundantly treated to gypsum for more than fifty years. That notwithstanding large crops of wheat, corn, oats, and barley had in a five years' rotation been grown, the land had continued to grow better.

It is, however, generally admitted that the mere growing and turning under of any green crop will not return to the soil any inorganic element; that is, if your land be deficient in lime, potash, or similar elements, the growing and turning under of a green crop will not supply these elements.

Hence the importance of an application of some active fertilizers, such as unadulterated guano, when seeding a crop to be turned under. The value of the fertilizer will thus be greatly enhanced. But if we apply a fertilizer, and soon thereafter take off a crop, very little is left for the future improvement of the land.—*Bryan Tyson.*

Comparative Value of Lime and Wood Ashes.

The *Live Stock Journal* replies to a correspondent as follows, who asks to "know if lime is not as valuable as wood ashes as a fertilizer for grain crops?"

"Many farmers regard wood ashes as a simple elementary substance, and thus are led to compare them with lime or gypsum. But wood ashes is a compound body composed of many elements.—The ashes of our forest trees contain all the inorganic elements that make up vegetable and animal bodies, including, of course, lime and gypsum.—Wood ash is, therefore, a fertilizer for all our crops. It contains ten to twenty per cent. of phosphate of lime, besides potash, soda, magnesia, sulphuric, phosphoric and carbonic acids, lime, silica, etc.—Ashes then are much more valuable for general application than lime or potash alone. Lime has a special application upon soils rich in organic matter, decomposing the sulphate of iron which is sometimes found, and forming combinations which are direct stimulants to vegetation. It unites with phosphoric acid in the soil and forms phosphate of lime (bone earth). When applied to a heavy clay soil, renders it more friable, less liable to bake in the sun, permits the air to circulate more freely, renders it warmer and the harvest a week earlier. Lime is most valuable when there is most organic matter in the soil. The carbonate of potash in wood ashes acts much in the same way as lime, and as a general fertilizer for all crops, ashes has a much higher value than lime."

Mulching.

The *Germantown Telegraph* thus discourses on mulching:—Trees transplanted this spring should be mulched as soon as the ground becomes dry. For this purpose grass is as good as anything.—Don't put around the tree too much at a time, and repeat the mulch when it gets dry and thin. Remove it two or three times during the summer, and stir up the ground well, then replace. It will save many a tree, if the season should be hot and dry. Strawberry, raspberry and blackberry beds should also be well mulched. Any quantity of dry stuff about a place, especially leaves, scrapings, &c., or short grass cut from the lawn, will do. An application of the contents of a hot-bed is very beneficial.

Lime should never be used in conjunction with a super-phosphate, and the application of super-phosphates to calcareous soils is of doubtful utility.

VARIETIES OF APPLES TO PLANT. -

A correspondent of the *Southern Planter and Farmer*, J. F. W. of Appomattox Co., Va., recommends the following varieties for his section :

For 100 trees, beginning with earliest and closing with the best keepers, ripening in succession, he names—Summer—2 June, 2 early Harvest, 2 Lippincott (Summer Rose), 2 Bough (sweet), 4 Keswick Codlin. Fall and early Winter—2 Gravenstein, 4 Fall Pippin, 2 Smoke House, 2 Domine, 6 Rome Beauty, 2 Paradise Winter Sweet. Winter—6 Cannon Pearmain, 8 Limber Twig, 6 Rawles Janet, 50 Wine Sap.

For 200 trees, he would double the above numbers.

For 300, 12 Cannon Pearmain, 16 Limber Twig, 12 Rawles Janet, 200 Wine Sap.

The June Apple is only desirable as the earliest, as the flavor is poor. The early Harvest is the best early apple, following the June. The Lippincott follows the last, a better and much more beautiful fruit. The Keswick Codlin is the next, which for early and regular bearing (every year), prolonged almost two months till 1st of October or later, for eating or cooking, I consider it superior to any summer apple known to me—in fact, to all combined. The flavor may not suit some, though I think it equal in that respect to any named, and it may be a little too acid for some palates. The Bough (sweet) ripens a little after the Early Harvest and just before the Lippincott. The Gravenstein is next. The Fall Pippin and Smoke-House are in season about the same time—the former, with which I am better acquainted, I think the better. These are followed by the Domine—a prodigious bearer (every year)—a large and choice apple, going into late fall or early winter. The Rome Beauty—the great apple of the Kanawha Valley and of the Cincinnati market—a very beautifully growing and early bearing tree, and the fruit of excellent taste and large—succeeds, and with it perhaps a little earlier, the Paradise Winter Sweet—the character indicated by the name.—The Winter I will not name in the exact order of maturity. The Cannon Pearmain is an excellent apple and good keeper, and its reputation here good ; but I have not found the variety equal to its character, as the tree does not seem to be very healthy or early, or abundant in bearing, though erect and handsome. The Limber Twig, though not *best*, eats well, and it should be cultivated for its good keeping qualities. Rawles Janet I think well suited to our section, and is of good reputation. But the Wine Sap is the paragon of apples, far surpassing all and every kind of its season, and but for its color, we might regard it as of the golden apples which grew in the Garden of the Hesperides. The tree bears very early and is the most healthy of all fruit trees, and the fruit is not equalled in all the characteristics of the *best* apple. The Keswick Codlin and the Wine Sap, my experience teaches me, surpass all other varieties combined, with which I am acquainted. In fact, these *two* would make a superior orchard, if you will wait a little in summer and in late fall. If any person shall need fall and early winter apples in greater

variety, let him plant a few Rambo Esopus, Spitzenburg, and Fallwater—all most excellent, and ripening in the order named.

We would like to hear the experience of any of our readers in regard to the best apples—early, fall, and late. We believe J. F. W. is right and wise in putting such a large proportion down for a late winter apple ; whether his choice of variety would be the proper one for this section, we leave open for discussion.

Cultivation of Apple Orchards.

Whether or not orchards should be regularly cultivated is a question which has frequently been very thoroughly discussed in the horticultural and agricultural journals of the country. Yet, if we are to judge from the frequent reference to it, both pro and con, in those papers, it is yet unsettled.—To us it seems that circumstances alone must decide the necessity for cultivation or otherwise. In almost any soil it is far best to give newly-set trees a few years' liberal cultivation. But after they are well established and begin to bear, our own preference is to sow apple orchards down in grass, to be grazed by small stock, such as sheep and hogs, and if not naturally rich the land should receive an occasional dressing of manure. For this purpose barn-yard manure is good, or flour of bone, ashes or lime may be used. After the land has been left in grass or unplowed for a few years, we believe it decidedly injudicious to plow at all ; but should it be necessary to plow, the furrows should be very shallow. The reason for this is that the surface being undisturbed, the rootlets, which are the mouths through which the tree feeds, approach very near the surface, and will be destroyed by the plow and the growth of the tree checked for some years. Any one that will observe the large and healthy growth of apple trees standing in the close sods that grow around old dwellings where the plow has not probably disturbed the surface in half a century, must become a convert to grass system, as it is called, provided always that the land is enriched as the door yards invariably are. We do not advocate the grass system for any trees except the apple. Peach and pear trees do far better by being regularly cultivated and unless the land is made rich and constantly supplied with manure of some kind, we do not think it best for apples. If the trees are planted as much as thirty feet apart, cultivation may be continued for eight or ten years after planting, care being taken to regularly decrease the width of the cultivated strip between the rows. The above is the result of twenty years' experience and observation.—*Southern Planter and Farmer.*

SOIL FOR PLASTER.—The *Live Stock Journal* says:—A sandy or gravelly soil is usually best adapted to the use of plaster, but it is found beneficial upon any soil abounding in vegetable matter. A clay soil has the power of absorbing ammonia from the air, which is one of the offices of plaster, and therefore plaster is not as beneficial upon a clayey as a sandy soil.

From the Country Gentleman.

RAISING CLOVER SEED.

The writer was born and bred in Southern Herkimer county, N. Y., where clover seed has been raised largely, and as a regular branch of farming for over forty years; himself taking a yearly share in its cultivation. The practice here was carried on so carefully and extensively that it at last became an established science and success; to many it was the most lucrative part of farming. It was attempted by some to make it a sole thing; a specialty, but it did not seem to succeed; there were some seasons when the seed was a comparative failure; besides, the work was too concentrated, many hands being required at the same time. The time of harvesting and threshing the crop made it difficult to secure sufficient aid. There were other things also forbidding, which are not necessary to mention here.

As a branch of rotation it is excellent, as it enriches and mellows the soil to a remarkable extent (when seed is raised as well as otherwise). My experience here agrees exactly with the conclusions of Voelcker. It prepares the land (worn out land) for succeeding crops, without manure; though it is benefited by manure. Almost all crops are improved by clover. Wheat is specially benefited. Oats, barley and peas grow well after clover; so does corn. The land also will do for seeding down again. Clover is the great fertilizer and ameliorator of the soil; *but only to the extent of the closeness of the stand.* This is the secret of the whole affair. If the seed is sown thick, gets a foothold and grows to maturity, there will be a corresponding amount of fertility in the numerous roots that crowd and enrich the soil—enrich it with a material (nitrogen) that is most needed. On ordinary soil, not too much run, it only needs plaster to aid in growing the crop. If the land is manured or otherwise rich, all the better will be the growth; the catch in particular is more apt to be secured; and this, I need not say, is of the first importance, as it is a necessity to the existence of the crop. My experience here is, that sowing on winter grain early in Spring (on late snows) is best. Next to this is sowing early on spring wheat or barley. Last, and not to be recommended, is sowing with oats. The importance of getting a good catch will be seen when we consider that eight to ten quarts of seed per acre usually sown, which, if it fails, is so much seed thrown away. This, on ten to twelve acres of land, is too much to lose. And the catch, unless a good one, is good for nothing; a light stand being sure to give but a light yield, which it will not do to carry.

It is the custom here to brush or harrow in the seed, if sown with spring grain. Some of the seed will be buried too deeply if harrowed, but most of it will come, and that almost irrespective of the season. The past spring, as well as other seasons, showed this clearly. If used to be the practice here to raise the large clover. The land was pastured till the fifteenth of June. It was pastured as close as it was possible to get it, in order to have the crop even, so as to ripen at the same time. This is necessary to avoid the sun on the one hand and the frost on the other; the sun, when severe, "blasting" the crop, the frost killing it. To secure this point of escape from both dangers, the fifteenth of June was found to be the time for starting the growth, with the medium clover about a week later, as this matured sooner. Sometimes, however, the point of escape did not occur at all, the heat extending too far, or the frost coming too soon. Generally, however, it was exempt from these dangers.

Immediately after the stock was removed, plaster was sown—one bushel per acre being the rule. This was done whether the land was poor, rich or indifferent, though it usually was not rich; usually land well run was given to clover to enrich it, and at the same time with prospect of realizing well from it. The soil here is varied, but mostly drift—that is, sandy and gravelly, with considerable clay. There are also alluvial lands and some stiff clay soils. Clover and clover seed do well on all of them, and have

done well for the forty years and more that they have been grown here. It has been grown as a crop in rotation, followed usually by timothy for a few years; the soil then turned down and put to corn and the grains, and then seeded down again. When a crop of seed was taken, it was often followed by the plow, as the clover died out by the process, and the land was in the finest condition for grain. The timothy sown with the clover, however, usually survived, and yielded a crop the next year and for several years to come.

Plaster, as I have said in another article, is indispensable to success in raising clover seed. This is thoroughly understood here. The thing has been tried with and without plaster. The writer remembers one year when forty acres of his father's land, kept for clover seed, proved a total failure without plaster, while the neighbors who had sown plaster had a fair yield. This was in the earlier days of raising clover seed. Shortly after the plaster is sown, the clover is seen to grow, whether there be a drouth or growing weather; the color of the plant is a dark blue, which is not seen if the plaster is withheld. The growth is steady, persevering remarkably in a drouth, though doing better of course in showery weather. In either case the growth goes on, the plant retaining its dark blue color—Those parts of the field that were missed when the plaster was sown, as was but too often the case, showed in streaks—the clover being small and pale. While the one was large, close and dark, the stems strong, full and juicy, with the heads full, large and perfect; the other lacked in blossom—sometimes to a greater, sometimes to a less extent—and of course could but be defective in seed. Hence the unmanured heads were light, contracted and uneven; while the others were plump, and bore sound, bright seed, often filling the head.

A point here is worthy of special remark: Where the land was rich, plaster used, and the season a growing one, so that the clover grew rank and lodged badly, the seed did not seem to suffer but yielded a good crop. The only objection was the mowing.—This trouble, however, only happened when plaster was used. It seemed to add vitality and give hardness to the plant. There was more "substance," it was thought—certainly more seed. The yield was generally from two to five bushels per acre upward, depending much upon the thickness of the stand and the nature of the season. Those who did not spare their seed (in sowing) were the fortunate ones. Those who had a thin stand, and neglected sowing their plaster in time, or omitted it altogether, were among the unfortunate ones.

The medium clover has almost superseded the large. Instead of pasturing the land, it often, with the medium, has a crop taken for hay; this done in time to have the field clear at the proper period—about the 20th of June. Pasturing, however, seems to be best; but it wants to be close, which is never an advantage to stock. Hence the scythe is now mostly used. Plaster, an avoidance of the hot sun and the frost at the blossoming period, and a thick stand, are the three requisites that are indispensable to success in the raising of clover seed.

F. G.

CLEANING BRASS.—The following is a recipe I have successfully tried in cleaning brass and copper: I make a mixture of one part of common nitric acid and one-half part sulphuric acid in a stone jar; then I place ready a pail of fresh water and a box of sawdust. I dip the articles to be cleaned in the acid, then remove them into the water, after which I rub them with sawdust. This immediately changes them to a brilliant color. If the brass is greasy, it must be first dipped in a strong solution of potash and soda in warm water. This cuts the grease so that the acid has the power to act. This is a Government recipe used in the arsenals.—D. H.

[We will add to the above recipe that first washing in clean water and second in water, in which aqua ammonia has been placed to neutralize all trace of the remaining acid upon the surface of the brass, is an improvement upon the above process, which is, in all other respects, a good one. After dipping in the ammonia-water and cleaning in the sawdust, if a good quality of lacquer be used, the effect is very fine. This process is excellent in preparing brass labels stamped from thin sheets.—*Editor of American Artisan.*

HORTICULTURE.

THE PEACH APHIS.

The Peach Aphis (*Aphis persica*), though introduced with the peach from its original Asiatic home, has never been a serious trouble to American Peach Growers. Here and there it has been an occasional visitant, but the larvæ of the lace wings which feed on them, seem to have been able to hold them entirely in check. But the present season they seem to have stolen a heavy march on their enemies, and have appeared in some localities in Maryland and Delaware on the young peach trees in countless numbers, and many a block of thousands which but a few weeks ago were the hope and pride of the owners, are now but a blackened forest of dried up sticks. It is probable that never in the history of the peach has this insect been so destructive.—It resembles indeed, in the havoc it has caused, the terrible destruction which has followed the path of the Colorado Beetle in the western States.

A closely allied species infests the cherry. This is the *Aphis Cerasi*, and though the two species are very nearly allied, the cherry aphis has never been known to feed on the peach, or the peach species to go to the cherry. One would think that they would sooner do this than starve, when their own special tree is not about, but each seems obstinately attached to its own food.

Once in a while the cherry aphis has been a terrible foe to the cherry growers of the north, but never probably to the great extent of the present peach trouble. A dozen years or so ago the writer took a trip up north on a visit to the leading gardens and nurseries, and among others stopped at a nursery at that time quite famous, owned by Mr. W. Reid, of Elizabethtown. That season they had a visit from the cherry aphis, similar to what our peach growers now have. The young trees were covered with the "devils," as the person who showed me over the grounds called them, until they looked as black as if bred up under Pittsburgh smoke. What was very remarkable, was the way in which they seemed to travel. Whole rows would not be affected by them, but they seemed to be in large irregular circles or patches of many yards in extent, as if the brood had originally started from a central point, radiating all around. No attempt was made to destroy them, the foreman contenting that they would die themselves soon, and might not appear again for many years. They had had them occasionally in years gone by, and per-

haps the next year there might not be one to be seen. It might be but a fancy, however, but they seemed to have a preference of some varieties over others. The Black Tartarian, if memory does not deceive, was a great favorite, while some May Duke's alongside were not much infested. It has not been stated whether any varieties of peaches are less liable to the Aphis, but probably all are alike welcome.

A good remedy is wanting—all washes are too laborious and expensive. The price per hundred for peach trees would not cover the cost. In greenhouses other species that are troublesome readily yield to smoke. It might be possible that a big smoke to the windward, and made to draw through a block of peach trees might save them, but this suggestion is made merely from this greenhouse experience, and of course not from any personal knowledge of the devastating powers of the peach insect itself, which the writer is happy to say, has so far passed his peach orchard disdainfully by.

THE CALIFORNIAN PITCHER PLANT.

The English garden papers are rejoicing over the flowering in that country, for the first time, of what they regard as among the greatest curiosities of the time—the Californian Pitcher plant. This was discovered on the expedition for surveying the Mexican Boundary some years ago, by a gentleman then attached to the government expedition. It was found to be quite different in structure from the Pitcher plants of the Eastern States, Sarracenias, and hence had to have a new name, and that of Dr. Darlington, the Botanist of Chester county in Pennsylvania, was adopted by Dr. Torrey, who named the plants brought home by the expedition, and it is now known as *Darlingtonia Californica*. We do not know whether it has been introduced to culture in our eastern gardens; but probably not. The Californian plants as a rule do not do well east. It may be that we shall not therefore soon see it in our collections; but as the flowering of this plant in Europe seems quite an event, and one of our own people had so much to do with its discovery, it is but meet that we make a note of it.

The application of soluble manures in a liquid form is better and more efficient than when applied in a dry state.

THE WISTARIA.

This beautiful climbing vine is well known.— Its wonderful power of growth is also a matter within every one's knowledge. Travelers in China speak of plants, each of which cover acres in extent, supported by pillars and lattice work, which make cool walking places beneath. In some of the older portions of our country, where settlements have been long in existence, some wistarias are known to have climbed to the top of the loftiest trees. Scott, in his beautiful work on Landscape Gardening, called *Suburban Home Grounds*, refers to some of these. It very often injures trees however, over which it twines. This is not because the act of climbing is in itself an injury, for the Virginia creeper or five finger—the poison vine, green Ivy, and other things go up trees without in the least injuring them; but because of the very rapid growth and thickening of the stems around the trunks of the encircled trees. This, of course, makes the space within each coil of the spiral less, and thus the tree is as tightly grasped as an animal would be in the folds of a huge Boa Constrictor. So great is this crushing power resulting from this annual thickening of the coiled stems, that huge piazza posts have been torn down in time by a stem of Wistaria, having been allowed to grow round instead of being trained up the post. An instance is on record where a piazza was supported by heavy iron pillars, and these pillars were in time bent in several places by the growth force of coils of Wistaria vines.

It is remarkable that it only grows rapidly when it has something to support its weight. When suffered to rest itself on the ground, it will go fifty or perhaps a hundred feet in a year. When it has to support its own weight it grows very little. Advantage has been taken of this fact to make what are known as Tree Wistarias. A young plant is trained up a stick six or more feet high. The stick remains two years or so, after that the Wistaria will remain standing of its own accord, and makes a nice bushy head without any disposition whatever to run, and when thus standing alone on the lawn, covered with its profusion of bloom in early Spring, it is one of the loveliest objects conceivable.

It is often called *Glycine*, but this is an original name. It has much the appearance of the American *Glycine Frutescens*, which is sometimes called the American Wistaria, but the seeds and seed vessels in the Wistaria distinguish it from *Glycine*.— In the former the seed vessels are flat, as also are the seeds, as flat indeed as if they had been under a tremendous roller. *Glycine* seed vessels are round. There is a variety of the American Wis-

taria called *Glycine Magnifica*, which is larger and a stronger grower than the American. The true Chinese Wistaria has never shown itself susceptible of much improvement. There is, however, a snow white variety which is much sought after by amateurs.

HARDINESS OF CERTAIN VARIETIES OF PEACHES.

In the middle of April, after the Peaches were in blossom, there was a sharp frost, which caused those who depend largely on the Peach crop, considerable anxiety. Time has shown that the crop was very much injured thereby, but it is singular to note that varieties usually thought more tender than others have escaped better than any, and this seems to many a fact incomprehensible. For instance, Hale's Early, on account of its being the earliest Peach of any considerable size or quality, is one of the most desirable, when it can be had in good condition, but it is one of the most liable of all to the rot, especially when grown in extra good ground, and therefore thought profitable when it escapes all disease, is looked on with a good deal of suspicion by planters.

The apparent hardiness under the Spring frost is more apparent than real. The Hale's, Troths, and other early Peaches, are "Early" on account of a rapid growth of the ovary immediately after flowering. Peaches all flower together, but these early ones hurry at once forward, while the later ones take their time about starting. Usually when Troth's Early or Hale's Early are the size of the ordinary marbles in use by boys, Crawford's late, and others of that class, are no larger than beans. When they are a little developed they are hardier than when in the grown state. The later Peaches in this Spring frost were thus caught, while the embryonic peaches were scarcely formed, and thus were readily destroyed. If the frost had been a few days earlier the Hale's might have had a very different story to tell. It would have been destroyed as well as the rest.

We thus see that it is true among vegetables as among human kind, that reputation often hangs by a very slender string. Because this season circumstances favored the escape of the Hale's, while so many others were destroyed, people who do not go beneath the surface of things will think the Hale's a hardy variety, while everybody knows it is not. The readers of the *Maryland Farmer* will, of course, know better, but there will be enough, we suppose, who do not read the *Farmer* to get up a considerable fame for the Hale's, through its "lucky shot" of this season.

INSECTS ON FRUITS.

Most of us engage in so many varied pursuits, that we have no time to devote to many things, which, with more attention, would well repay the additional labor. Thus it is with fruit culture.—The great foe to its success is the abundance of destructive insects. All this trouble can be avoided, or at least most of it, by intermittent personal care. But who can afford to do it. Here we are in the same fix ourselves. Some years ago the Curculio bothered us so on our cherry trees that we determined we would have cherries, and would keep the Curculio off. So we procured a quantity of dwarf trees. These are grafted on the Mahaleb stock, and although they grow pretty strong on this when trimmed up, yet if suffered to branch from the ground, they make plants which are tolerably well within reach. We made the calculation that a few yards of cheap mosquito netting would be a cheap security against the Curculio. Last year we had a considerable quantity of fruit on the young trees, and this year was ready for a full crop. The mosquito netting was purchased in early Spring, so as to be on hand when the time should come. The trees were very full of blossoms, and there was every prospect of at least a bushel from each tree. The flowers set their blossoms, and day after day came, and still something imperative seemed to call for the hands to do. Tired at length at waiting for a convenient time, though pressed with personal work, we decided to go at the trees and wrap them with our own hands. The netting was carried to the trees, but alas! it was found that the little rascal of an insect had been there before us, and had placed his brand on every fruit. The fact is, so long as any one can raise fruit with no trouble and in spite of insects, there is not much sympathy for those who cannot, and perhaps, we do not feel ourselves the imperative necessity of doing something ourselves to keep the insects down. But the time may come when everybody, as well as we, will get their due share of the insect plague, and then we shall all have to work for our fruit whether any other work is pressing or not. As it is now, thanks to the birds before the fruit is ripe, the insects are kept a little down, and we get some fruit without trouble, if not as much as we think we ought.

AN English writer recommends that potatoes not only be stored in a dry place, but wherever practicable they be exposed, from time to time, to the fumes of burning sulphur. This he declares will retard the progress of disease, and prevent further infection, without in any manner injuring the tubers for food.

THE WHITE GRUB.

A friend complains terribly of the white grub, which has got in among a bed of young roses, and threatens to destroy the whole. It feeds on the roots, and soon the whole plant dies away. A northern nurseryman passing through the city related his experience with it, and it may be of use to others. He remarked that the year after setting out some thousands of trees on a newly broken up piece of ground, the trees died off by the hundreds. He found the ground fairly alive with them, and in many cases roots a quarter of an inch thick had been eaten off. He started to work on them with the stereotyped remedies—now lime—now salt—all to no, or very little purpose. He noted, however, that the birds were particularly fond of them, and it occurred to him that the best way was to give them all the chance possible to devour them.—Ducks were encouraged to work in among the trees, and he kept the cultivator continually going, in order to give the ducks a chance to get at them, and every year afterwards the grubs gave him less and less trouble. Indeed he has had no serious trouble since.

These grubs are the larvæ of the May Beetle, a small chocolate brown insect, about the size of a dwarf bean, and which appears to take two or three years to undergo its transformations beneath the ground. In the meantime they feed on the roots of trees and other vegetation—roses being a delicious tit bit for them. Our nursery friend remarked that he was satisfied that the chance he gave the birds to work among the grubs, by his continual use of the hoe harrow, was the reason he was now so free from them, as he had occasion this Spring to remove a row of Norway spruces that had been growing six years in a piece of land without cultivation, and here the grubs existed by the thousands.

The hint may be of service to our Rose friend, as well to the many gardeners and farmers who in innumerable ways are troubled with the pest.

DESTROYING INSECTS.

The following paragraph is obtaining extensive circulation in this country:—

A writer in a French horticultural journal relates his experience: "After sunset, I place in the centre of my orchard an old barrel, the inside of which I have previously tarred. At the bottom of the barrel I place a lighted lamp. Insects of many kinds, attracted by the light, go for the lamp, and, while circling around it, strike against the sides of the barrel, where meeting with the tar their wings and legs become so clogged that they fall helpless to the bottom. In the morning I ex-

amine the barrel, and frequently take out of it 10 or 12 gallons of cockchafers, which I at once destroy. A few pence worth of tar employed in this way will, without any further trouble, be the means of destroying innumerable numbers of these insects, whose larvæ are among the most destructive pests the gardener or farmer has to contend against."

It may be that this would be a good remedy in May for the May-bug which eats the leaves of all kinds of trees to an enormous extent; but the misfortune is that it destroys at the same time immense numbers of insects which are friends to the fruit grower instead of enemies, by their feeding on those which are injurious to us. Some years ago the advice was popular in the papers to hang bottles of sweetened liquid among the branches of apple trees, to catch the codling moth, simply because English gardeners employed the same means in destroying wasps and hornets, which eat peaches and other things among small fruit trees. But it is positively asserted by intelligent Entomologists that the insects caught in these bottles here are insect friends, not insect enemies. It seems as if this ought not to be the case however. One would think that insects which feed *exclusively* on other insects, had no business sporting about after vegetable drinks! However, the Entomologists protest that this is the case, and as they ought to know, it would be well for those who are disposed to try these "French" modes to be sure before they deeply engage in them, of the character of the insects they are by these means destroying.

A FERN SOCIETY.

It is not so many years ago since plants were grown and valued for their flowers alone. With a better knowledge of Palms, came a love for fine foliage, and at length fern lovers became a numerous class. In our country these plants are extensively grown, and fern cases for window culture are quite common. In England where plant culture is a passion extending from the poor garret in the crowded city to the royal palace, ferns and foliage plants are particularly cared for. They have houses especially devoted to their culture where obscured light, and regular atmospheric moisture, so essential to successful fern growing, can be easily furnished them.

So great has the love of ferns in particular grown among the English people, that a society for the culture of ferns and the dissemination of fern knowledge has been established, and the Pteridological Society has taken a prominent place at once among the leading institutions of Britain. Pteris is one of the larger families of ferns, and Pteridology is taken to be "the knowledge of Ferns."

SKELETON ROSE LEAVES.

We have a friend who has a small garden, and the Roses in this garden are always the pleasure and delight of every visitor. He has not over two dozen, but these produce flowers of the finest, the leaves are of the healthiest, and one is almost sure of getting a nice rosebud there, for any especial occasion that may arise. Our neighbor's Roses, always excepting this one solitary friend, are at this season, frightful to behold. The Rose bugs in millions have had every petal, and the little Rose slug has eaten all the green out of the leaves, leaving the plant but a perfect skeleton.

Now be it known, the writer of this has no M. D. after his name, but because he has long loved flowers and fruits, and has a fair variety of all kinds in his garden and orchard, people will come to him when their plants get sick, to comfort and console them. They want prescriptions for this and that. We often think *P. D.*—*Doctor Plantarum*—might legally go after our simple name. Our good Rose friend has never asked us for any nostrum. What shall we do for our roses? often comes from others, but never from him. These earnest seekers after remedies do not want anything that takes any trouble. If they can get some sort of a tobacco pipe, with a tube a hundred feet long, so that in dressing gown and slippers they can sit from the parlor windows and blow smoke in among the insect pests, they would think something like that might do. It is no use to tell these people what to do, unless it takes the form of whale oil soap, sulphur, or something that can be put on in an instant and done with.

Once, as we were wondering why our industrious friend with the roses never came to consult us, as others did, we sought an introduction to him in his little garden, and found him then and there at work with them. He had a basin of water, into which he stuck the rose bugs, and gave them, he said as food for the chickens, which did not run about in his garden, but were kept close in a very neat but very well attended to chicken yard. All the roses about had been by this time skeletonized—we asked how his were green. He simply said he went over them once in a while, and when any one appeared, pinched it. "Bless you," says he, "it takes no time at all. I make it a rule to spend half an hour before breakfast in my garden, every day, just to look after these little things. I admire the flowers as they grow, and pick off the insects at the same time."

We have profited many a time by this lesson; and in hopes that more of our readers may, we repeat it for their benefit.

Interdependence of Leaves and Roots.

Some people perceive a fact so clearly and so deeply that they are unable to note when other principles conspire to require modification, and hence there is no end of false reasoning and false practice. We see this well illustrated by arguments in English papers, as to the benefits of pruning at transplanting. Some who generally write very sensibly about things, take the ground that not a branch should be cut, because "no roots can be formed without tops, and hence the more tops the more roots."

Now this is true of a growing tree. Undoubtedly the more vigorous and healthy a tree is, the more it grows and pushes out fine strong leaves, the more will the roots grow in return. But a transplanted tree differs from one growing undisturbed, in this, that lowest minimum quantity of root necessary to keep the branches in sap, has been disturbed.—Evaporation goes on in addition to growth, and if there is not enough moisture for evaporation, there not only can be no growth, but the tree dies. The transplanted tree cannot make up even this evaporative claim, and hence the difference. Where, however, this necessary waste can be accommodated fully, these leaves and branches are an advantage, and re-act favorably on roots, and this fact will come into excellent use in understanding how to treat grafted trees. A bud or graft has, perhaps, been placed on a stem several feet above the ground, and above and below it buds will push forth into branches, which all know will rob the grafted plant of much of its nutriment. Therefore, we pull them off. But the roots always suffer a severe check when this is done. The sap circulates very slowly up the stem. It becomes hidebound and very often the whole stem with the graft and all dies. These budding shoots ought not to be taken entirely off, unless there is a clear chance of the graft pushing at once strong and vigorously. They should merely have their hearts nipped out, so as to prevent their onward development. The leaves will then be a benefit instead of an injury to the stem.

EUROPEAN TOMATO CULTURE.

We grow this delicious vegetable with so much ease in this country, that we can scarcely imagine how much trouble other peoples have to take with it. The following from the *London Journal of Horticulture*, represents tomato culture in England:

"The shoots should be thinned when they crowd each other, and if they show fruit plentifully no stopping need be resorted to. If the growths are gross, and the fruit or show for fruit distant, stop

at the third or fourth joint, and to ensure the swelling of the fruit stop at the joint beyond the cluster, but not if fruit is there showing, as it is evident the plants are in a good bearing state, no stopping being required to induce fruitful growths. It is well to remove most of the large leaves, but do not make too great a clearance at once. Go over the plants frequently, stopping, thinning the shoots, and removing any large leaves which shade the fruit too much. There is no limit to the fruit that ought to be left on a plant, but a cluster of three may ripen in every square foot of surface; thinning should be confined to the small fruit, leaving the finest to ripen, say, three on each cluster.—Water abundantly and with liquid manure in dry weather."

AMERICAN HORTICULTURE.

The following compliment to American Horticulture, and the kindred arts, which we find in the *London Garden*, is pleasant to receive. It should not, however, blind us to the fact, that we have not made use of half the advantages we enjoy, that we might have done. There is, however, an awakening in regard to our deficiencies in Horticultural art, and the *Maryland Farmer* shares in the general determination to look more after our enjoyments in this line. But to the *Garden* paragraph:—

"Apricots from Spain are now selling in Covent Garden; they are the variety known as the Kaisha, and come from Valencia. What a pity it is that wars and revolutions make progress in cultivation and fruit growing almost impossible in this fine country; whereas, in parts of America, not yet settled twenty years, these arts are in a highly advanced state. The South of France sends large supplies to our markets; whereas Spain, though possessing a more favourable climate for early crops, sends, as yet, very little."

To Foretell the Apple Crop.

This is how an English writer talks of foretelling the apple crop, and judges of the prospective English one:

"I may remark that experienced fruit-growers like to see these well swelled out at this the earliest period of their growth, as a good bold bloom portends a successful fruit-setting if nothing more; moreover, they like, in the case of Apples, for the petals when they fall to do so flatways, and not to be curled up, and the larger each petal is than a shilling the better they are liked. In the past season I have heard many assert they have measured some larger than a half-crown, but I have not noticed any of that size; still they are large, and before the setting-in of the cold weather on April 29th the bloom was exceedingly rich and good, and I am not sure yet that the cold weather has done them much harm up to the time I write, May 12th."

THE
MARYLAND FARMER,
 A STANDARD MAGAZINE

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Proprietor.

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THE ROOMS OF THE
Maryland Agricultural and Mechanical Association,

Are now open for the RECEPTION OF VISITORS, daily from 10 A. M. to 6 P. M.

☞ S. W. corner of Fayette and Eutaw streets.

A. BOWIE DAVIS, *President.*

T. B. DORSEY, *Secretary.*

The Maryland Horticultural Society

will hold its next monthly meeting in this City on Tuesday, July 14th, at 4 o'clock, P. M. at the residence of Ezra Whitman, Esq., President.—Friends of the cause are invited to attend.

EZRA WHITMAN, *President.*

T. C. DORSEY, *Secretary.*

Maryland Horticultural Society.

The First Exhibition of this Society will be held at Lehmann's Hall, on Wednesday, Thursday and Friday, September 9th, 10th and 11th, in the city of Baltimore. The indications are that it will prove a decided success. The Executive Committee are earnest and assiduous in their labors, and confidently rely upon the cordial co-operation of every friend of horticulture in the State. The list of premiums are liberal, and they invite those interested, whether professional or amateur culturists to prepare to make the Exhibition worthy of our State. Premium Lists can be procured by addressing T. C. Dorsey, Secretary, Baltimore.

Sixth Annual Exhibition of the Maryland State Agricultural Society.

At a recent meeting of the Executive Committee it was determined to hold the Sixth Annual Exhibition at Pinlico, commencing on Tuesday, October 6th, to continue four days. The preparations being made by the committee are ample, and will guarantee success. The track for the trials of speed is in admirable condition, and the stabling being remodelled for the accommodation of stock. Everything will be done to make the present display worthy of the agricultural and mechanical resources of our State. It is to be hoped that their efforts will be heartily aided and seconded by our farmers and breeders, both in and out of the State. With the hearty co-operation of those most interested, the Annual Fair cannot be other than a great success. The List of Premiums and Regulations have been revised and adopted, and will shortly be printed for distribution, and can be secured by addressing T. B. Dorsey, Secretary, Baltimore.

THE CROPS.—From all parts of our own State as well as from States adjoining, advices are encouraging regarding the growing crops of cereals and the same news reaches us from the West.

ILLNESS OF W. W. W. BOWIE.—We regret to announce to the many friends of our *Associate*, that he has been seriously ill from about the first of May last, much of the time confined to his bed. Within the last two weeks he has sufficiently improved to enable him to visit Georgetown, where he is the guest and under the treatment of Dr. Grafton Tyler, an old and valued friend, where, it is the hope and prayer of all, he may be speedily restored to health and happiness. He is still too feeble to resume his labors.

The Maryland Horticultural Society.

The June meeting and display of this Association held on the evening of June 17th, at Lehmann's Hall, was a vast improvement on all previous meetings. The hall was most elegantly decorated for the occasion, and the tables for the display of plants, fruits and flowers were so arranged as to give the finest effect to the large and beautiful collection. Mr. John Feast, Robert J. Halliday, A. L. Black, John Cook, John A. Needles, Jesse Marden, Jr., R. W. L. Rasin and F. Fauth, were exhibitors, particulars of which will be found in the report of the proceedings.

The meeting was largely attended among whom were a number of ladies, who manifested unusual interest in the display, as well as the proceedings of the meeting, and the Society has the assurance that a large number propose to take a lively participation in its affairs, which we hail as another evidence and guarantee of its success. Monthly displays of this kind have a tendency to produce a feeling of generous rivalry, in which the public are greatly interested by the improved cultivation of the choicest fruits, flowers, &c. The Annual Exhibitions will develop also a love for the beautiful and useful in a greatly enlarged sense—and we may say, enhance the value of property in our city, besides adding to the pleasures of living.—The June meeting was one of hopeful promise for the future—the display—the attendance—the ladies—the acquisition of new members—gave a new inspiration to the cause. The Society therefore renews its invitation, to all—the professional and the amateur—male and female—young and old—who seek the promotion of Horticulture—to an earnest co-operation in its affairs. At the invitation of the President, the July meeting will be held on Tuesday the 14th, at his beautiful suburban residence to which all are cordially invited.

Keep Weeds Down.

C. C. Fuller, of Mass. in the *Germantown Telegraph*, says it is poor policy to expend money for manures and then let weeds steal it. Five years ago he bought a piece of land which had been used as a garden and was very rich, but was full of witch-grass. He planted it to beets. A neighbor asked him why he did so. He replied he thought it good soil for them. "That may be," said he, "but you will find you will raise more witch-grass than beets." In August he happened along again, and expressed his surprise at the wonderful growth of the beets. Not a trace of witch-grass to be seen.

Keep weeds down and they cannot come up.

Annual Exhibition of the Maryland Institute.

The Twenty-seventh annual Exhibition of this popular Institution, will commence on the 30th of September next and continue to October 31st, 1874. Already circulars have been sent to a large number of Manufacturers, Artists, Mechanic, Inventors and others in every section of the country, inviting them to contribute whatever they may deem worthy of public exposition, and of competing for the premiums which will be awarded by the Managers.—We do not know that we can add anything at this time to what has already been said in praise of an Institution which has accomplished so much good service not only to the residents of Baltimore, but also to exhibitors residing in various parts of the country. Though a local institution, and designed to promote the interests of science and the mechanic arts in our midst, it has proved itself to be of more general utility in the prominence which it has given to useful inventions. The Schools connected with the Institute have not only been for the most part well attended, but have also been the means of imparting instruction to a large number of pupils whose talents might otherwise have remained undeveloped. To this end, also, the excellent Library which has become so popular with the members of the Institute, has proved a most efficient auxiliary. In other respects the Maryland Institute has been equally fortunate. Its general management has been worthy of all praise, and every effort has been made, in filling the subordinate Departments, to put the right persons in the right places. It is this laudible zeal on the part of all who have been connected with the Institute, which has won for it the high reputation it has acquired, and which we are happy to say it fairly deserves.

James S. Suter, Esq., assisted by the entire Committee on Exhibition, are now energetically engaged instituting proper measures to make the coming display one that will redound to the credit of the Institute and the advancement of the Arts and Manufactures. Information in regard to the regulations, &c., may be obtained by application to James S. Suter, Esq., Chairman, Baltimore, Md

IMPROVED COTSWOLD SHEEP.—Those interested we refer to C. J. B. Mitchell's advertisement, offering for sale this superior breed of sheep; those who visited the Cattle Show of last year cannot forget the splendid specimens exhibited by this gentleman and which bore off all the prizes—especially conspicuous on that occasion was the imported Ram "Duke of Gloucester," the "noblest Roman of them all." Mr. Mitchell's stock is too well known to need any commendation from us.

THE COLORADO POTATO BUG.

This destructive creature has for several years past been destroying the potato and other crops in many western States, but this year has reached our own State and has spread havoc in several counties. The egg is of a deep yellow color, oval in shape, and about the size of a pin's head, and are laid on the under side of the leaf. The young bug is nearly red in color, with two rows of black spots on either side. The old ones are in shape not unlike the land terrapin, dark brown in color, with ten yellow stripes running lengthwise of the insect varying in size from three-eighths to half an inch in length, and about one-fourth of an inch in breadth. The young bugs have ravenous appetites and devote their entire time to eating the vines, whilst the old ones are much less voracious. They propagate with fearful rapidity.

A correspondent at St. Dennis, Baltimore county, writes about the 1st of June, as follows: "As an outpost scout in the agricultural interest, I send you the first notice of the advent of the foe. I have been so (un) fortunate as to capture one of the coming army, a "Colorado Bug," upon my potatoes, and I send the captive that he may be seen and known. In two days my cucumbers were utterly destroyed by an insect with 6 stripes, and longer in shape but of the same color. Unless it is the young of the specimen which I send it is a new species here and must be added to the farmer's plagues.

Trusting that there may be no foe we cannot vanquish, and placing considerable faith in chickens, I remain, yours, truly, &c."

A variety of means have been resorted to destroy this beetle, but without much success. Paris Green, which has heretofore proved so effectual, was comparatively a failure, so were lime, plaster and bug exterminators which were heretofore so speedy in their effect. It is conceded that the only way to get rid of them is by catching and killing them. Some have succeeded in killing them by crushing them with the foot and the blade of a hoe—others by crushing them between two small smooth pieces of board. The Western farmers have decided that the only way to destroy them is to catch and burn. The bugs are caught in hand nets made of misquito bar stuff, from two to three feet long and about two feet wide, and surrounded by a lath frame, and the net held on one side of the potato vine while a sharp blow upon the opposite side of the vine dislodges the bugs and they fall into the net. They say this plan is a tedious one but it is the most effective one yet discovered.

A Mrs. Samuel Deforce, of Businessburgh, Belmont county, Ohio, says: "that her potato vines were very quickly and effectively cleaned of the above insect by a couple of guinea fowls, and she thinks that these industrious and persevering bug pickers might be very advantageously employed wherever potatoes are grown."

A Prince George county correspondent of Baltimore *Sun*, says: Paris Green will kill the beetle when it touches them, but the only real effective

remedy is to pick off the old ones and the eggs as fast as they appear. Gathering them into a shallow pan with coal oil, and afterwards setting fire to the mass will effectually kill them. He says the old beetles go in the ground as soon as the eggs are laid, but the young ones will in a remarkably short space of time destroy an entire field. On the early potato crop the beetles will probably not prove very destructive; but I fear they will entirely destroy the late crop, especially after a stay of one or two years. My advice would therefore be hereafter to raise only early potatoes, and at the same time keep the beetles in check. When done with the potatoes they will attack the tomatoes, and probably also the sweet potatoes. Of potatoes they eat the tops only, but of tomatoes also the fruit, which is at any rate, so soiled by them as to be unfit to eat.

It is stated that a farmer in Harford county, Md., cleared the bug out of his potato patch by turning a pair of ducks among them, he went along the rows, shook off the bugs, the ducks following him and gobbling them up. Poultry from all evidence, seems to be a sore destroyer of these pests.

EARLINESS OF CORN.

Good tests of vegetables are much wanted. Varieties are so numerous, and the testimony so conflicting that no one knows what to select. A correspondent of the *Country Gentleman* recently gave a list of varieties of sweet corn, all of which were sown together on the 19th of May, at Waterford, New York, with the following results:

| Fit for Table. | | Fit for Table. | |
|--------------------------|---------|---------------------------|---------|
| Early Minnesota..... | July 19 | Russell's Prolific..... | Aug. 9 |
| Pratt's Early..... | July 23 | Extra Early Minne- | |
| Ex. Early Sugar, July 25 | | sota | Aug. 9 |
| Early Narragansett, | | A kind without | |
| July 28 | | name..... | Aug. 9 |
| " Narragansett, Aug. 5 | | Campbell's 60 day, Aug. 9 | |
| Crosby's Early..... | Aug. 9 | Stowell's Ever'n, Aug. 20 | |
| Moore's Early Con- | | Manimoth | Aug. 26 |
| cord..... | Aug. 9 | Asylum | Sep. 2 |

This table has, of course, reference to earliness alone, which is the main thing with market gardeners. For those who grow for their own use, some of the others might be more desirable, as a day or two of difference, though of vast importance to those whose good fortune depends on getting among the first in season to market, is not of so much consequence as high flavor or other good qualities. The *Stowell's Evergreen* is one of the most popular with gardeners generally, but if there are others as good in all other qualities and a month earlier, it ought to be better known.

The great difference in the times of coming to table fitness in the above list of corn is very striking; and although this difference is well known in the case of trees, such as Apples, Peaches, &c., it is rare among annuals.

Lemon juice and glycerine will clean and soften the hands.

For the Maryland Farmer.

A Growl from a Grumbler.

I fear I am naturally a grumbler;—at any rate this very hot weather, if you admit me to your columns, give me leave to grumble a little. The cause of my complaint may be very unreasonable, for you will see I want other people to write their articles or essays to suit my notions, and mine may be wrong notions. Let me explain.

I am greatly interested in two subjects, Fertilizers and Sheep-Farming. I am a poor land improver, and I believe in these two things. Naturally, I want to know all that will help me in the use of them, and what I mainly want, in the lack of my own experience, is the experience of somebody else who will tell me plainly what he has tried and seen and learned about them for himself. I open a fresh number of an agricultural journal then, and find a communication from just the man I want to hear from; one who I am told, has had long years of success in sheep-management, made profit out of his flocks and enriched his lands.

Surely here is what I am looking for, but what do I find? Why, a historical sketch, starting with righteous Abel and running through 4000 years, to the shepherds who, "when Joseph and Mary went up to Judea to be taxed," "were there tending their flocks." The writer gives us too, a moral view of the subject. There is an intimation that the difference in the characters of Abel and Cain, lay in the fact of the former being "a feeder of sheep" and the latter of a more profane occupation. He is a little hard on Noah, who, he says, "took to practices" which "the daughters of Eve," (meaning the modern woman-crusaders), are still "vainly endeavoring to obviate." The falling away of the good man is attributed to his having "turned his attention to the business of a husbandman," and planting a vineyard, and neglecting in consequence to look after his sheep. Abraham, we are told, "was a prominent breeder of sheep," and Isaac and Jacob, and Abimelech, and Laban, and Joseph and his brethren, and Jethro, and Job, and the Amalekites, and David, and Adonijah, and Jabez the Hagarite—but time fails me to follow up this sketch of the history of sheep and sheep-breeders as found in the Hebrew scriptures and under the Jewish dispensation. Now, I am not saying that all this is not entertaining and useful reading to such as delight in ancient lore, but my interest is in Christian sheep, and sheep of to-day. What could Noah tell me about improving poor land with sheep, when his land had been just overflowed; and what did Abraham know about Cotswolds and South Downs?

Leaving our sheep in the wilderness of ancient history, we turn to another journal, and find a report on Fertilizers, submitted by a committee to an intelligent association of a neighboring State. We suppose that such a committee has been making some careful investigations into the character and application of the modern fertilizers in which all poor-land farmers are so deeply interested.—Instead of this we find ourselves immediately carried to ancient Rome and detained there from the time of Numa Pompilius to the period of the Empire, our lands all this time neglected. We are informed that Numa praised those who fertilized their lands; also that he lived about the time of Isaiah the prophet. Cato called Sicily the granary of Rome, and the enormous crops of wheat grown on that island, the writer thinks, was owing to "the wise use of the various fertilizing materials at their command." What these were, and how they were used, does not appear. They made no experiments with, "Turner's Excelsior" or Baugh's Raw Bone." Uzziah, we are told, was a very wise king, and "gave particular protection to all those cultivating lands and keeping cattle."

Now again, I will not presume to judge for your readers as to how they relish all such historical treatment of sheep and fertilizers, but, for my own part, I don't care a copper for the opinion of Uzziah or Cato or Numa Pompilius or any other heathen of them all, on the subject of fertilizers, nor does it concern me in the least, what Moses or any other of the prophets may have thought of sheep-breeding. I go humbly to such wise teachers for the wisdom they professed to instruct us in, but that was not agricultural wisdom.

In a word, Messrs. Editors, I protest that ancient history has nothing to do with modern agriculture, and I wish our teachers would follow the wise counsel of I don't know who, viz., when they have any thing to say, say it, and when they have nothing to say, then say *that*. Not a word of this is aimed at your sensible and practical correspondents who tell us whereof they know, or who are investigating and seeking for knowledge. It is the professional essayist who, having written himself out of all he knows, thinks he must still write on till the Encyclopedias run out. Hence comes Numa Pompilius, Uzziah and Abimelech, *Et Hinc Ille Lachryma*.

GRUMBLER.

DEVONS AND HEREFORDS.—We call attention to the statement of John Merryman, Esq. of Hayfield, Baltimore county, as to the productiveness of his Hereford cow Agnes. He maintains that Devons and Herefords have claims to be considered of value for dairy purposes, specially after the tests recently made.

Devons and Herefords for Dairy Purposes.

To the Editors of the Maryland Farmer.

It is so generally supposed that Devons and Herefords have no claim to be considered of value for Dairy purposes, I now desire to remind your readers, that the late Mr. George Patterson, did unmistakably establish the fact, as regards Devons, to the contrary, and that at his death, upon the Springfield estate, there was as good herd of Dairy cows (all Devons) as could be produced in the United States; the result was owing to Mr. Patterson's attention to breeding from his largest milkers, and securing his bull, (which he did by importation, at intervals of three years, from Bloomfield), who was noted in England for his herd of milking Devons. Following the practice of Mr. Patterson, I purchased in May 1864, from F. W. Stone, of Canada, the bull Admiral—2355—E. H. B., bred from Gentle, a fine milker, by Carlisle—923, E. H. B., both bred, by Lord Bernick. Five of Admiral's calves have proved to be large milkers, none, giving less, in twenty-four hours, than four gallons of good milk, for a period of four months after calving, and milking continuously to within two to four weeks of calving. Agnes, calved 20th November, 1866, out of Milton, imported, bred by John Longmore, of Orleton, England, has been recently tested as regards milk and butter producing qualities—her yield of milk in twenty-four hours was five gallons and one pint—and of butter in seven days, twelve lbs. and ten oz. I have from Agnes, two heifers, 3 and 14 months old, a bull "Monocacy," now between two and three years bred from her, is now the property of Col. Edward Lloyd, of Wye House, Talbot County. The Col. has also recently purchased the bull calf Duke of Edinburgh out of Giantess (imported), by Sir Richard 2d, imported.

JOHN MERRYMAN.

Thorough Culture.

The theory that there can be no drought in the soil which is ploughed so deeply and comminuted or pulverized so thoroughly that the air can strike down into it far enough to come to a temperature below the dew point, is nothing new. That theory has been familiar to scientific agriculturists for years. It is founded on the fact that whenever the atmosphere comes in contact with a substance colder than itself, moisture is precipitated, no matter how dry the season may be. So, if a soil be so prepared that the atmosphere can *penetrate* it to a point where the soil is colder than atmosphere, moisture will be precipitated at that point, and then, by capillary attraction, be drawn through the soil to the surface, whereby, whatever is growing or planted in the soil will be refreshed,

POTOMAC FRUIT GROWERS.**JUNE SESSION.**

Washington, June 2, 1874.

This useful society held its regular monthly meeting to-day in the Board of Trade rooms, about twenty members present. Chalkley Gillingham, president, in the chair,—P. H. Folsom, secretary.

The Secretary read an interesting history of the Society, and of the Apple.

On motion of Dr. Snodgrass, a vote of thanks was tendered to the Secretary for his admirable address, after some discussion by Messrs. Snodgrass, King, Curtiss, Chamberlain, Piersons, Clarke and others.

The resignation of Mr. Folsom, as Secretary, was offered, and after some discussion was accepted: and on motion of Col. S. E. Chamberlain a vote of thanks was tendered for his past services.

Mr. T. A. Hopkins moved that the Society proceed to the election of Secretary, and nominated therefor Col. D. S. Curtiss, of Washington; and on motion of Major King, the late secretary Mr. Folsom, was directed to cast the unanimous vote of the society for Mr. Curtiss, which he did and the chair declared him unanimously elected, when the outgoing secretary conducted the secretary elect to the desk, and he assumed the duties of the office, after brief remarks in acknowledgment of the honor conferred on him and pledging earnest efforts for the interests and advancement of the society, asking the aid of all members.

It was on motion, ordered that the ordinary membership fees from Mr. Curtiss, be remitted, in view of his services as secretary.

The society then proceeded to the pleasant task of testing and discussing two handsome baskets of delicious strawberries presented by Stacy Snowden, of Fairfax. They were the Wilson and the Monarch of the West, a new and handsome berry, large, compact, smooth, and much sweeter than the Wilson, and promises to be a valuable fruit for market and amateurs.

N. W. Piersons, of Fairfax, exhibited six varieties of clover, raised in this vicinity, viz: the Alsike, the red, yellow, white, lucerne, and another called the buck or Buffalo. The Alsike is superior for bees; the lucerne is better for meadows than for pasture.

After some further conversation for the better advancement of the society, it adjourned to meet at this place on the first Tuesday in July next.

The public, with their wives and daughters and sweethearts, are cordially invited to be present and enjoy the meetings, participate in the discussions, and particularly to become active members, which costs only the trifle of a membership fee of one dollar a year.

Every fruit grower, florist and gardener in this region may derive benefit by membership in this society.

POTOMAC.

MARYLAND HORTICULTURAL SOCIETY.

JUNE MEETING AND DISPLAY.

This Society held its June meeting on Tuesday Evening, June 17th, at Lehmann's Hall, which had been secured by the Executive Committee, to accommodate the rapidly-increasing attendance, as also the contributions to the monthly display.—Ezra Whitman, president, in the chair—T. C. Dorsey, secretary.

This meeting was largely attended by members—a great number of citizens—and scores of ladies, who gave a charm and interest to the scene.—Tables were suitably arranged in the hall for the display of plants, fruits and flowers, of which there were a goodly number. The Floral portion of the hall was unusually attractive. The table assigned to the Strawberries—luscious and of great size—was constantly surrounded by visitors. The beautiful display of rare and choice plants called forth the highest admiration. The hall was elegantly illuminated, and the chandeliers adorned with beautiful hanging baskets, and altogether the members felt the meeting was a great success.

John Feast, 295 Lexington Street, Baltimore, had on exhibition sixty of the very finest specimens of rare plants, mostly in bloom, a very attractive display—also one rustic basket, and stand with specimens of cut flowers, a fine Seedling Cactus (Feastii), a superb flower, fine pink.

Robert J. Halladay, of Baltimore, presented an attractive and choice collection of Geraniums, Begonias, Petunia, Agapanthus, Dracænia, coffee plant, &c.

A. L. Black, of Baltimore, exhibited a fine collection of Plants and Flowers, among which were eight varieties of rare and beautiful Caladiums—three varieties of Fuchsia—Dracænia—twenty varieties of Geraniums, Pandanus Javanicum, &c.

John A. Needles, offered two fine specimens of Magnolia Grandiflora, from a tree forty-two years old.

John Cook, of Carroll, Baltimore county, had on exhibition six varieties of Strawberries, which were the centre of attraction, among which were the Kentucky Late, Boydens No. 30, Jucunda, Chas. Downing, Russell's Prolific, and Monarch of the West—this display has seldom been excelled for size and flavor.

Jesse Marden, Jr., exhibited a basket of extra large, reddish crimson, sweet Agriculturist Strawberry.

R. W. L. Rasin, exhibited a fine basket of Strawberries, arranged in a most tasteful manner with the rarest flowers—a beautiful offering.

F. Fauth, gardener for Ezra Whitman, presented a dozen Fuchsias, double and variegated Geraniums, Coleus, Centaurea, Ferns, two vases of flowers, and two bouquets.

John D. Oakford placed on exhibition three bottles with specimens of the dreaded Colorado potato bug, with which he had experimented, with the following result: those in one bottle had been in Cayenne pepper for 36 hours, those in another, in a solution of saltpetre 12 hours, and the third in Parish Green for 1 hour. Those in the Cayenne and Saltpetre were alive, those in the Parish Green were dead.

A paper "On Organization," was presented by

Samuel Martin, of Baltimore, and read, looking to an active participation of every member as a means of advancing the general cause. The paper was referred to the Executive Committee.

A letter from Dawson Lawrence, of Howard county, Md., was read, urging a proper consideration of vegetables by the Society:

He says:—"Whether these articles, vegetables, will occupy a very prominent place in your proceedings and exhibitions its members will determine, but great good has heretofore been done by Horticultural Societies through their exhibitions in disseminating a knowledge of good varieties of vegetables.

The catalogues of the seedsmen hold the same relation to the Gardener that the untested theories of the chemical laboratory do to the farmer.

When a farmer is satisfied by demonstration the truth of a theory, he will believe it: but the gardener has this advantage over a farmer: an exhibition by a Horticultural Society of the 60 pound cabbage, or the colossal asparagus, or the early pea, or the 10 pound beet, or the unsurpassable tomato, bears conviction on its face: it is easier to demonstrate a theory concerning the production of vegetables, than it is one destined to effect the production of the cereals on a larger area: this is no doubt one reason why the horticultural art has made so much greater progress than the purely agricultural art; for this reason, your society will have an easier task before it to convince cultivators of the excellence of certain varieties than our friends of the sister Agricultural Society will have in its efforts to improve the seeds, implements and processes of agriculturists: * * * The appointment of a committee on vegetables to report once a year on best varieties, &c., would give to the raising of vegetables in Maryland a substantial basis."

Mr. Oakford rose to congratulate the Society on the presence of so many ladies, and to call the attention of the Society to the subject of enlisting their active co-operation in their meetings and exhibitions, as he felt assured that much could be accomplished thereby—that they knew no such word as fail in any enterprise in which they embarked, and hoped the Executive Committee would promptly consider the matter.

Mr. Oakford stated he understood there was a gentleman in the room, who had a remedy for the Potato Bug, which was immediate destruction to that foe, and without injury to the plant.

In reply, Mr. George J. Popplein said that Paris Green had been effective in previous years in destroying the bug in Ohio and other western States, but this year it had not been so successful—he could not account for the failure, as he knew Paris Green was as pure as before, as he manufactured the article himself.

Mr. Rasin—who had been alluded to by Mr. Oakford—stated that he had experimented with a solution upon the bugs, which, if it did not kill them, it weakened them amazingly. The plant seemed to thrive by the use of the solution, but the bug did not. He could not, just now, give the ingredients of the solution.

Dr. Latimer remarked that the matter had been discussed before the Academy of Sciences, and that no effective remedy had been discovered to destroy them, and that the only sure way was to catch and kill them.

Mr. Whitman invited the Society to hold its next monthly meeting at his house, at 4 o'clock, on Tuesday, July 14th, on Boundary Avenue, between Linden and Eutaw Place, which on motion of Mr. E. L. Rogers was accepted, whereupon the Society adjourned until that time, when a full attendance is expected.

Maryland Agricultural and Mechanical Association.

MAY MEETING.

The May meeting of this Society was held at their Rooms on Thursday 9th. A. Bowie Davis, President, in the chair—T. B. Dorsey, Secretary.

Mr. Davis, who submitted a paper on the District Road System, at the last meeting, which received the endorsement of the Society, stated that at a meeting of the farmer of Montgomery County, they had decided in favor of the District System in preference to the County System.

The President further stated, that the committee appointed at the last meeting to inquire into the expediency and practicability of procuring Peruvian Guano directly from the importers, in quantities to suit the wants of the farmer, instead of getting it second hand, had made the necessary inquiries and ascertained that it could be accomplished, if the farmers would indicate to the committee what arrangements they desired to be made.

Mr. Sands presented specimens of the dreaded Colorado Potato Bug which had made its appearance in many parts of this State, particularly in Baltimore County, which were critically examined by the members present.

Mr. Davis here introduced Rev. Thomas McCormick, of Baltimore, now 83 years old, a nephew of Thomas Moore, the inventor of the Refrigerator.—Mr. Moore, presented a paper which was read "About Refrigerators and their Inventor." The writer stated that he carried butter to market in the first Refrigerator ever made.

The late Thomas Moore, a member of the Society of Friends, living at that time in the neighborhood of Sandy Spring, in Montgomery county, Md., was the inventor, for which he took out a patent in or about the year 1803. The first refrigerator was of small size, and more for the purpose of carrying butter to market on horse-back, as most of the marketing was done in that way in those days. The refrigerator consisted of a cider tub, of oval form, and about 18 or 20 inches deep, in which was placed a tin box, with space on each side for ice in small lumps. The outside of the wooden box was covered with rabbitskins, with the fur on, and over that was a covering of coarse woolen cloth. Afterwards Mr. Moore, made refrigerators of larger dimensions and in a different manner for family and dairy purposes. Thomas Jefferson, then President of the United States, some of the heads of departments, and other citizens of the District of Columbia who had ice-houses, used Thos. Moore's patent refrigerators. It was, however, of little practical benefit to farmers generally, as not one in a hundred had an ice-house, so they went out of use for a number of years. Thomas Moore, the writer said, was a remarkable man. His father, Thomas Moore, an Irish Quaker, came to this country early in the last century, settled first in Pennsylvania, where he married and afterwards removed to Loudoun county, Va. About 1791 Thos. Moore removed to Maryland having married Mary Brooke, daughter of Roger Brooke, of Brooke Grove, in Montgomery county, and soon distinguished himself as a practical farmer. The State of Maryland is greatly indebted to him for many improvements in agriculture. He had the model farm of the county and State which is now owned by E. J. Hall, President of the Montgomery County Agricultural Society. Persons came from long distances to see the farm and to witness the deep plowing with the mammoth plow of Mr. Moore's own invention. One distinguished visitor was Chas. Carroll of Carrollton. In the year 1805 Mr. Moore was employed by the corporation of Georgetown to construct the causeway from Mason's Island to the Virginia shore, for which he received \$24,000,

and completed the work in less than one year. Afterwards he was employed by the United States government to lay out the great national route to the West. During the war of 1812 to 1816 he took charge of the Union Manufacturing Company's work near Ellicott's Mills as chief manager. He was also chief engineer of the James River canal, and served the Chesapeake and Ohio canal in the same capacity. He died on the 3d of October, 1822, in the 63d year of his age.

Mr. Davis introduced another veteran, William Brown, now 79 years of age—the inventor and maker of the first Premium Plow in Maryland—it having been exhibited and premium taken by him, over several competitors at the Maryland Cattle Show, held about four miles from Baltimore, on the Frederick Road, over fifty-two years ago.

He gave an interesting sketch of his early life and success as a mechanic, and subsequently as a farmer. He said he was worn out by old age, but he was pleased at being present at a meeting of farmers. He said he was advised to take his plow to the cattle show so he made a couple, not better than the others, except that they may have been better painted. He found a great many beautiful plows there, nicely painted, some of them striped. When the plowing match began his plow went far ahead of the others, and people crowded around, and some wanted to know the price of his plow. To one he replied twenty dollars, and he was handed over a twenty dollar gold piece, which was fashionable at that time. Mr. Brown remarked, "I tell you, I felt bully."

He said he did not have a dollar in his pocket when he went to the Show. He was told that he ought to join the society before competing for a prize, and that the admission fee was \$2. Mr. Brown replied he did not have a dollar, and a badge was pinned on him without paying the admission fee, and he was then just as good a member as any body. The result of the contest gave Mr. Brown a start in life and he is now considered one of the most successful farmers in Montgomery county.

Mr. Brown exhibited to the meeting the Silver Cup which was awarded him at the Cattle Show, as the successful competitor,—it attracted much attention, and at the suggestion of Mr. Reese the members united in drinking a bumper—in cold water of course—to the victor of the first plowing match in Maryland.

Mr. Brown further promised to present to the Society an Old Mammoth Plow, of his make, for their inspection.

On motion a vote of thanks was tendered Mr. Brown and Mr. McCormick, and they were both elected honorary members.

The reading of a paper, prepared by D. Lawrence, on Utilizing Home Manures, was on motion deferred until the next meeting.

On motion the July and August monthly meetings were dispensed with, and the Society adjourned to meet on the first Thursday in September, at 7½ o'clock, P. M., the time having been changed from 12 M.

Meeting of the Executive Committee.

The Executive Committee of the State Association met on Tuesday, June 16th, to perfect arrangements for the Autumn exhibition which it has been decided to hold at Pimlico, on Tuesday, October 6th, to continue four days. A majority of the Committee were present.

The resignation of General Geo. S. Brown, of Baltimore city, a member of the executive committee, was received and accepted.

John R. Streett, of Harford county, was elected to the vacancy.

Some additions were made to the rules, and a premium list agreed upon, amounting in the aggregate to nine or ten thousand dollars.

It was agreed to have racing, or trials of speed, only during three days of the exhibition, viz: three trotting races on Wednesday, two on Thursday and one, a running race, on Friday.

The running race on Friday is for a piece of silver valued at \$200; single dash, one mile, horses to be ridden by members of the Maryland Jockey Club, welter weights, post stakes. There are to be five entries for each of the trotting races, each to pay ten per cent. of the premiums for the privilege of entering, except for the race for horses that have never beaten 2.55.

It was decided to offer a sweepstake of \$100 for the best home thoroughbred or imported stallion, and a like stake for the best heavy draft stallion. The horses taking the sweepstakes are not to compete for the smaller premiums. The sweepstakes offered for stallions last year were struck from the list.

For working oxen the premiums were raised from \$50 to \$100, to range as follows: First premium, \$50; second do., \$30; third do., \$20.

A premium of \$50 was offered for the best ten acres of corn. There was but little other change made in the premium list as offered last year.

All entries of live stock are to be made on or before the 21st of September. It was agreed that any person making fraudulent entries shall be expelled and prohibited from exhibiting thereafter. Where there is no competition for a premium, ten per cent. of the premium money is to be retained by the association. The upper doors of all stables will be required to be kept open from nine A. M. to five P. M. during the exhibition.

Alfred Jenkins was appointed superintendent of class H, carriages and leather manufactures, in the place of A. Bowie Davis, elected president since the last exhibition.

The committee on grounds, exhibition hall, &c., has been increased, and now consists of Joseph H. Rieman, chairman, R. F. Maynard, W. S. G. Baker, John Merryman and C. K. Harrison. Change was also made in the committee on track, which now consists of Geo. B. Mulligan, chairman, Geo. P. West, C. T. Cockey, G. H. Elder and Adolphus C. Cook.

Richard F. Maynard will be the marshal, and W. D. Brackenridge, of Govanstown, Baltimore county superintendent of exhibition hall. The oration will be delivered on Thursday. Senator Thurman, of Ohio, has been invited for this occasion, but has not as yet definitely decided to come, having requested a few days for consideration. The Committee are making every effort to make the Exhibition of 1874 a complete success, and expect the hearty co-operation of farmers, stock breeders, implement and machine manufacturers, horticulturists, &c.

HOW TO TREAT FRUIT TREES.

In considering the growth of organisms, the action of the alkalies is to be looked upon as scarcely less important than that of air and water. Lime is the great animal alkali, and potash the vegetable one; its old name of vegetable kali expressed that fact, and all the potash of commerce is well known to be derived from wood ashes. The importance of potash as a manure has been frequently overlooked by farmers, who rarely know the large amount of this material found in grass, grain, crops, leaves, barnyard manure, roots, and fruits. How potash acts in plants, in conjunction with carbon and silex, to form woody fiber, starch, sugar, and oil, is yet unknown to chemical observers, but the fact of its action is beyond a doubt. Liebig long since pointed out that the chief cause of barrenness is the waste of potash carried off by rich crops, especially tobacco, with no replacement by proper manure. How many millions of pounds of potash have been sent to Europe from the forests of America, and in the grain, tobacco, and hemp! Luckily one alkali may be replaced by another, and we have received a considerable quantity of soda from European seaweed and in the shape of salt. Lately, nitrate of soda from natural deposits in South America is brought to us at a cheap price,

The point to which we now call attention is that our farmers and fruit growers have ignored, or rather been ignorant of the importance of wood ashes as a vegetable stimulant and as the leading constituent of plants. Even coal ashes, now thrown away as useless, have been shown, both by experiment and analysis, to possess a fair share of alkaline value. According to our observation, if the practice of putting a mixture of wood and coal ashes around the stems of fruit trees and vines, particularly early in the spring, were followed as a general rule, our crops of apples, grapes, peaches, etc., would be greatly benefitted in both quality and quantity, and the trees and vines would last longer. We will relate only one experiment.

Some twenty-five years ago, we treated an old hollow pippin apple tree as follows: The hollow, to the height of eight feet, was filled and rammed with a compost of wood ashes, garden mold, and a little waste lime (carbonate). This filling was securely fastened in by boards. The next year, the crop of sound fruit was sixteen bushels from an old shell of a tree that had borne nothing of any account for some time. But the strangest part was what followed. For seventeen years after the filling, that old pippin tree continued to flourish and bear well.

Let us call attention to still another point of importance in fruit-raising. This is the bearing year for apples and fruit in general in New England; probably it is also in some other parts. Now when such years come, the farmers rejoice too much at their prosperity and abuse it, as nearly all people do the gifts of fortune. We should be temperate as to the quantity of our fruit as well as of fruit juices. By proper trimming and plucking, the apple crop in bearing years may be reduced to but little more than half a crop as to number, but the improvement in size and price, and in the future effect, will more than balance the loss. Next February, March, or April, according to latitude, let the tree trimmer stimulate and nourish his trees and vines with a fair supply of ashes; and in nearly every case he will have a good crop of fruit in the non-bearing year.—*Scientific American*.

HOW TO FEED RYE.—Says the *American Agriculturist*:—We have fed rye to horses and cows as green fodder, cut when coming into ear, in which state it is very excellent feed. To feed rye that has been cut ripe, we would thrash it, grind the grain along with corn or oats, cut the straw in a fodder-cutter, moisten it with water, sprinkle a handful of salt and three quarters of the ground feed upon a large pailful of the moist cut straw.—This makes a very good feed for an ordinary sized horse when working moderately.

For the Maryland Farmer.

POULTRY BREEDING.

No. 6.

Having put up our Poultry house and prepared our yards, we must set some hens and raise a few chickens. A setting room of course is necessary, which was (or should have been) provided for in our Poultry house. During the warm weather the nests should either be filled with earth to the depth of two or three inches or else a sod cut and put in the bottom of the nest. This should be covered with straw, just sufficiently to keep the eggs clean. The earth should be kept *moist*. A better plan still for hot weather, is to use small movable coops four feet square with a lath rim attached, of same size or larger. These coops have no bottom, and the hens are set right on the earth. A coop of this size is large enough for six hens. I find the eggs hatch better on the ground than in the building.—Earlier in the season it is *safe* to set the hens in the house.

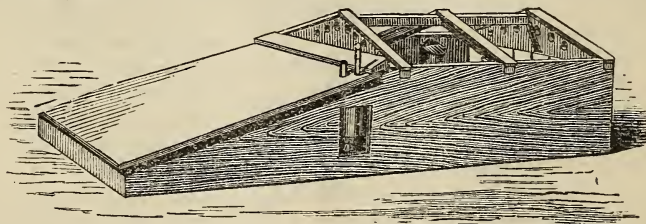
After the eggs have been under the hen five days examine them by candlelight; those that are perfectly clear, lay one side; they will not hatch: place all those that are fertile—those which show dark spots in them, or are dark on one side—under part of the hens, and give fresh eggs to the hen or hens that are thus left without any. These *clear* eggs may be set upon end in a cool place, and when the chicks hatch, boiled for them. Except in very early spring, in latitude south of New York,

water, and put in the “mother” will retain the heat until nearly morning.

The size of the one from which the accompanying engraving was made, is $3\frac{1}{2}$ feet long, 20 inches wide, and 10 inches high on the sides. Four panes of glass are over the front, each 10 x 12 inches. A drop door in front closes it at night and excludes rats, weasels, &c. The back part decreases in height to about three inches at the extreme end: this sloping top is lined with a sheep's fleece, the wool hanging downward. I prefer putting this on in strips, running lengthwise, as the chicks then get *between* the strips of wool and seem better protected from the cold.

The one here represented had a hot water warming attachment; which I gave up a year or two since. Inside of the “mother,” through the glass, is seen a small tin water fountain hanging on the side. An Artificial mother of this size should cost *complete*, not over \$6: it will shelter fifty chicks until six weeks old, after which the number should be decreased to thirty.

When the chicks are first put out they will eat but very little. The yolk of one egg, boiled hard is enough for the first meal of thirty chicks. This, with stale bread moistened with water, is their feed for the first three days. After that I give cracked corn once a day, also shrunken wheat or spring wheat—*never screenings*—until they are old enough to eat whole corn. Another good feed, and one on which chickens, both old and young, thrive won-



I should advise the use of an Artificial mother for the young chicks, instead of placing them under hens. The advantages of the “mother” are cleanliness; no treading the weakly ones under foot; no pecking chicks of another brood to death; no chicks standing shivering and peeping with cold, while the hen is clucking and fretting around the coop—they can run under the fleece and get warm, and out again at any time—one, two, three or more broods can be put into the “mother” and all of different ages; while if hens were used it would require as many coops and hens as there were broods. Then there is the time saved in feeding; only one coop (or “mother”) to be visited, instead of three or four.

When the nights are cold, a jug filled with hot

water, is Indian meal mixed into a stiff dough with water, and baked in a pan. Crumble it up and feed it. I give no water until the chicks are three days old, after that they have pure fresh water by them all the time. When the chicks are first put into the “mother,” grease the head of every one, with melted lard, or better still with an ointment composed of one oz. Mercurial Ointment; one oz. Lard; half oz. Horn of Sulphur; half oz. Crude Petroleum—thoroughly mixed and incorporated together. This is sure death to all lice, and if repeated in about ten days or two weeks, a certain prevention of gapes. As soon as the chicks are old enough to roost they should be excluded from the “mother” and made to roost on the trees or in the Poultry house.

A. M. HALSTED,

Brookside Poultry Yards, June, 1874.

THE DAIRY.

LONG TABLE TALK ON DAIRY MATTERS.

TALK NO. VI.

CORN AND COB MEAL.

Will it pay to grind corn and cob up together? Is there really any nutriment in the cob? are questions which present themselves to the dairyman when he looks at the large quantities of corn in the ear stored in his buildings; he is feeding a vast amount of home raised and bought grain: the mill is a long distance off: the roads are bad: time is money and the toll for grinding is heavy: let us see whether there is money or profit in the cob.

It has been urged as an objection to the feeding of corn and cob meal that the coarse sharp edged particles of cob are apt to injure the intestines of the animal and cause inflammation: allusions to this will be observed in the testimony we give below:

First, what does the cob contain? Is there any nutritive value in the article itself, aside from the useful part it might play as giving *bulk* to the otherwise fine and concentrated meal?

A word on this subject: it has been found by repeated experiment, by L. B. Arnold, that corn meal when fed dry, alone passes into the fourth stomach of bovines, not a particle being found in the first second or third division: thus escaping that thorough digestion which food receives which passes into the first stomach with coarse food is re-masticated, and goes through the successive divisions: without sufficient bulk in feed, it passes at once into the fourth stomach: without enough bulk for distension of the coats of the stomach, the gastric juices cannot act upon a concentrated food: we remember, in our own experience, the death of a neighbor's ox, which had been worked hard on a hot day, fed meal, and died: post mortem examination showed the meal in a wad in the animal.

Now to the constituents of the cob:

1. The proportion of ash to the cob is 56; of which 47.1 is potash, 1.2 soda, 4.1 magnesia, 3.4 lime, 4.4 phosphoric acid, 1.9 sulphuric acid, 26.4 silica.

2. In 1000 parts of the air dry cob there was found of water 115; ash 5: which contained potash 2.4, soda 0.1, magnesia 0.2, lime 0.2, phosphoric acid 0.2, sulphuric acid 0.1, silica 1.3, sulphur 1.3.

3. Dr. Nichols reports an analysis of corn cob (very dry) in the *Boston Journal of Chemistry*, as follows:

| | |
|---------------------------------------|--------|
| Water..... | 7.48 |
| Crude Fibre | 30.95 |
| Ash..... | 1.16 |
| Carbo-hydrates, fat, albuminoids..... | 60.41 |
| | 100 00 |

This 60 per cent. represents the nutritive value: wheat straw contains 37 per cent: oat straw 43 per cent: rye straw 30 per cent. in the aggregate of these articles. Says Dr. Nichols: "these results indicate the utility of feeding them to our animals, provided there are no objections of a purely physical (mechanical) character, arising from bulk, and difficulty of reducing the cob to a sufficiently fine powder."

4. The *Live Stock Journal* says: "If you have a good mill and can cut the cobs fine, we should advise grinding cobs and all: we have fed thousands of bushels of this ground, and never suffered any detriment: we regard the nutritive value of the cob equal to the best corn fodder."

5. Thomas Gawthorp, West Grove, Chester Co., Pa., by repeated trials with his own cows, has fully satisfied himself that they do as well with corn and cob meal and bran, as with pure corn meal and bran.

In commenting on the above statement, the *Practical Farmer* says: "The amount of nutriment corn cobs is so very small that this result will have to be explained on the supposition of the ground cob's acting to promote digestion by distending the stomach," to which comment we think the analysis somewhat modifies.

6. A correspondent of the *Rural New Yorker* says: "I have fed corn ground on the ear for 15 years, feeding 5 to 20 head every winter, giving from 1 to 6 quarts at a feed, generally twice a day for 10 years, it has been very extensively fed in this part of the country, and I have not heard of a single animal's being injured though I watched closely to see if I could detect anything of the kind, but I came to the conclusion it was a false alarm."

7. "Willis," in *Ohio Farmer* writes: "In the Spring of '55 I took to mill 30 bushels corn on the ear, and had it ground together: some said that a portion of the cob that divides the kernel would injure the stomach and intestines: others said not. I fed it to a young span of mares until it was gone, breaking up in the mean time sod ground that was never broken before: I never had horses do better nor feel so lively during all my Spring work: I recommend it as a safe feed."

We have but one piece of evidence on the other side which we cannot trace to its origin, but we will give and comment:

"Corn-cob meal is a comparatively worthless article, paying little more than the cost of grinding."

If it will do this it *pays*, and we think the analy-

sis shows it is comparatively valuable so far as *constituents* are concerned.

"The nutriment is so small that if the cob were ground alone no animal could be induced to touch it."

Upon the contrary we call to mind the statement of Dr. H. G. Lawrence, to the effect that a cow was kept a long time on cobs alone, scalded we believe, and in some sections now farmers will break up the cobs and scald them, put meal over them and feed to cows.

But the same article also contains the following in favor of using the cob :

"A pig when put up to fatten, if fed too exclusively on fine Indian meal, which is very hearty food, is very liable to cloy, from the fact that the meal will lie in a solid mass in the stomach and not furnish a sufficient distension to the walls of that organ, and in the intestinal canal. All animals that are fed upon highly concentrated and hearty food, must have something coarser and more bulky to be fully satisfied, and to keep the digestive organs in full activity and health.

When it is ground with the grain as we commonly find cob meal, it undoubtedly serves the purpose of distending the stomach, and of giving to the food the bulk which the animal requires. An ox fed on meal will often eat coarse swale hay with avidity to gain that distension which a too concentrated food does not furnish, and without which there will be the gnawings of hunger.

Still there is a trace of nutriment in the cob itself. Dr. Salisbury, who wrote a prize essay on Indian Corn for the New York State Agricultural Society, said that "by rejecting the cobs of one thousand lbs of dry ears, about two hundred pounds of organic matter is lost, which consists of thirteen and one-half pounds of sugar and extract, one hundred and twenty-seven and one-half pounds of fibre, forty-five and one-half pounds of potash, one and one-half pounds of albumen, twenty-eight one-hundredths of a pound of casein, two and three-tenths pounds of gum or dextrine and seven and three-tenths pounds of glutinous matter. Hence the cob, although not rich in nutritive matter, can by no means be said to be destitute of those proximate principle which go to support respiration, and sustain animal heat, and those which are capable of being transformed into nerve, muscle, &c., and the phosphates which contribute so largely to the formation of bone." It is probable that a mixture of the cob with the meal, secure in many cases, a more complete digestion of the food. This is an incidental advantage which is independent of any slight nutriment there may be in the cob itself, and which as we said, is so slight of itself as, in our opinion, not to pay for the expense of grinding, especially as we can gain all the advantage of a proper distension of the stomach by feeding some roots, pumpkins, or other coarser food in connection with meal.

We give some of OUR OWN EXPERIMENTS on three native cows.

1. We fed them 4 quarts each wheat, bran (middlings rather ; not bran proper) morning and evening with cut hay wet and mixed ; dry fodder at noon : one peck of bran a day.

2. Next we gave them 2 quarts corn and cob meal, and 2 quarts bran each morning and evening, making a peck a day ; feed and treatment otherwise same : cost of feed was about same in both cases : The result in pounds of milk was as follows for five milkings :

| | on Bran. | Bran & Cob-meal. |
|----------------|----------|------------------|
| Cow No. 1..... | 43½..... | 43 |
| " 2..... | 44½..... | 45 |
| " 3..... | 42..... | 49 |

The average percentage of cream (two tests each cow) was as follows :

| | on Bran. | Bran & Cob-meal. |
|----------------|----------|------------------|
| Cow No. 1..... | 8½..... | 10 |
| " 2..... | 9½..... | 11½..... |
| " 3..... | 5½..... | 10 |

When it is remembered that bran is the great dairy feed, that it has to be hauled a long distance sometimes, and is scarce and high at times, and that corn can frequently be purchased for \$2 and \$3 a barrel, (10 bushels cob and all,) these figures, in addition to the testimony above presented, will enable our dairy friends to form an estimate of the value of cob-meal for dairy feed : but this value will depend on locality : whilst the cob does contain much nutriment, we cannot think it can ordinarily be ground fine enough to render its properties profitably available : where the mill is at a long distance, the time, toll, wear and trouble will make the task too expensive to allow any profit, especially if the food is not steamed after being ground : but where the mill is right at hand and toll reasonable, and especially if the food is steamed before being fed, we think the evidence points to the advantage of grinding all together : we have set up a Young America Corn and Cob Crusher in our own yard, and as we are far from mill, not only in distance, but by roads, which multiply the distance, we are satisfied with the arrangement.

ZINC FOR BUTTER BOXES.

In regard to the common use of zinc in the dairy, particularly as the ice chamber in butter boxes we notice that J. L. Cassels, Chemist, warns dairymen and housekeepers that zinc or galvanized iron dairy and household utensils are poisonous. He says that "salts of zinc are produced by the action of the water of Lake Erie, on zinc lined pipes, the water in 24 hours becoming bluish white and tasting distinctly of zinc. Zinc is very easily dissolved, even by the weakest acids, and in situations where no acids are perceptible ; all its salts are poisonous, and the effects on the human system cumulative—like arsenic in small doses."

If the water of Lake Erie, which we believe supplies Cleveland with drinking water, can have such a corrosive, dissolving influence in 24 hours, the acids in butter, formed from the oils it contains, would have a very serious effect upon any zinc with which they should come in contact : we do not know of any use of zinc in the dairy for which the best tin would not be a good substitute, although we have never heard of any trouble from that source : zinc is mostly used as an ice box in the center of the butter shelves in butter boxes, and this use keeps the butter cool and fresh so that the limited development of butyric, caproic or caprylic acid on a short journey, particularly in good butter, could have no greatly deleterious effect on the zinc.

Cream Gauge Lactometer.

Which are your best butter cows? Get some test tubes, (two for each cow, if you have a small dairy, or even for a large dairy we do not see how any accurate relative test can be made, unless the milk of the same mess is made the basis of the test) all of same size, and fill one for each cow with night's milk, and another set for morning's milk: divide the length of the tube into tenths and measure the number of tenths of cream after all has risen: each tenth will be 10 per cent.: divide each tenth into tenths: each of these subdivisions will represent one per cent.: thus, cream which occupies one tenth and half of another division, will be 15 per cent. of the whole.

Some of the test tubes are graded when bought, but this is not necessary: paper would soon be washed off: make a stick of smooth hard wood the exact length—allowing for bulge at bottom of tube—and divide into tenths and hundredths with a pencil and compass: by placing this beside each tube, the relative richness of the milk is readily ascertained:



make a frame for the tubes and set in the water or on a shelf where they will not be jarred or broken. We object to the term *lactometer*—milk measurer—for this article, because we have English to describe it: the Latin does not. *

THE VIRTUES OF BUTTERMILK.—M. Robing, in a paper presented to the French Academy, thus extols the virtue of buttermilk: Life exists only in combustion, but the combustion, which occurs in our bodies, like that which takes place in our chimneys leaves a detritus which is fatal to life. To remove this we would administer lactic acid with ordinary food. This acid is known to possess the power of removing or destroying the incrustations which form on the arteries, cartilages and valves of the heart. As buttermilk abounds in this acid, and is, moreover, an agreeable kind of food, its habitual use, it is urged, will free the system from these causes, which inevitably cause death between the seventy-fifth (!) and hundredth year." (!)

SALT TO A POUND OF BUTTER.—At a recent meeting of the Fulton Farmer's Club, Pa., the question was asked, "How much salt should be put in a pound of butter?" One member answered, half an ounce—another gave the receipt of Sharpless, the noted dairyman of Chester county, which is one ounce of salt to three pounds of butter.

THE APIARY.

WHY DON'T FARMERS KEEP BEES?

Mr. Quinby, of St. Johnsville, N. Y., a high authority on everything pertaining to bee-keeping, says the *American Bee Journal*, discussed the above question in a paper read before the North-Eastern Bee-keepers' Association at its annual meeting. He assigns four reasons for the neglect of bee-keeping on the part of farmers. 1st. They don't know how. 2nd. They doubt if it will pay. 3rd. They have had such poor success in wintering bees. 4th. They are afraid of being stung.

To these reasons, quite sufficient in themselves to account for the fact that very few farmers keep bees, we would add another—namely, want of enterprise. There is a quality for which successful men of business are noted which is very scarce among farmers, and which we call "enterprise." It leads to the trial of new and improved methods; to the making of ventures here and there on the principle, "Nothing venture, nothing win;" to an intelligent scrutiny, of things generally; and to energetic action on any direction that seems to promise adequate reward for diligent effort.

For some cause or other this quality is lacking in the great majority of farmers. Were it not so, there would be more manuring and better tillage of land; fewer bars and more gates; some display of taste about rural homes; a general adoption of improved stock; carefully kept farm accounts; and many other things that are as rarely found around country homesteads as hives of bees.

Enterprise is the result of education, and of that sharpening of wits which comes with the association of minds and the friction of ideas in the social and business contracts of life. Agricultural colleges for farmers' sons, and for any who contemplate rural industry; the circulation of agricultural periodicals and books; more visiting and travel on the part of farmers and their families; the establishment and energetic working of farmers' clubs; and such like means, will tend to cure an evil whose presence, is indicated all around us in bad farming, woe-begone looking homes, tumble-down fences, ill-bred stock, absence of gardens, and last, but not least, neglect of bee-keeping.

A GOOD RECEIPT FOR FEEDING BEES.—Take at the rate of five pounds of refined or white sugar, two gallons soft water, one tablespoonful of salt, ten grains cream-tartar; put all together, bring to a boil, skim, and when cold add eight ounces pulverized slippery elm bark, or fine oat meal, stir it well, then feed in the hive. During the summer use but four pounds of sugar.

Live Stock Register.

HINTS FOR THE CARE OF HORSES.

At a recent meeting of the Farmers' Club of the American Institute in New York, G. W. Johnston read a paper on "The Horse," in which we find a number of valuable hints regarding the management and care of that most useful of our dumb servants. With reference to balking, the speaker said that horses frequently resist because they fail to understand what is required of them; or it may occur from overloading sore shoulders, or being worked until exhausted. The latter is especially the case in young animals. The vice can only be corrected by kindness and gentle treatment, and it is recommended, when the horse attempts it, to jump out of the wagon, and pat and reassure him by a kind word, carefully examine the harness, and then get in again as if expecting him to go. This will generally prove effectual.

Mr. Johnston says that the French are the best authorities on the dieting of horses, and that they hold that, under all circumstances in the giving of food, age and condition should be taken into consideration. Small fodder is better than hay for old horses, as it is more easily masticated and swallowed. When a horse is working hard, his main food should be oats. If he works but little, hay alone will answer. For a saddle or a light carriage horse, half a peck of good oats and thirteen pounds of hay are sufficient. The hay should be wet with salt water—a teaspoonful of salt to a bucket of water. Oats possess more nutritious matter for making flesh than any other kind of food; but a small quantity of mown grass should always be given in the spring to horses not kept in pasture. A horse should have river water rather than well or spring water, as the latter is cold and hard, while the former is sweet and comparatively warm. One bucket morning and night, or, what is better, a half bucket at four different times a day, is the proper quantity. If a horse refuses food after drinking, he should be allowed rest, as the refusal is always evidence of exhaustion.

The stable should always be well drained and sufficiently lighted, because the vapors from a damp, putrid floor, and the sudden change from darkness to light, will almost certainly cause blindness. Let proper openings be made, just under the ceiling, to permit the hot foul air to escape, and free ventilation be allowed, at the bottom of the walls, to admit fresh air, for impure and confined air causes broken wind. The fresh air should enter through a number of small holes, rather than

through large ones, such as an open window, as there is less danger from drafts, which causes chills and colds. The temperature of a stable should not be over seventy degrees in summer, nor under forty-five degrees in winter. Extremes of heats or cold are equally bad. Use a hot, close, and foul stable if you wish to kill your horse. By such means glanders, inflammation, incurable cough, or disease of the lungs is sure to follow. Another very important matter for consideration of the farmer is

THE MANNER OF SHOEING HORSES.

Although this subject has engaged the attention of mankind from the earliest ages, in consequence of its importance, it is wonderful how little we have yet realized in the way of securing a covering for the horse's hoof which shall answer the purposes required. Many scores of different shoes have been designed by persons ready to vouch for their excellence, but they have generally been false in theory. Of the many methods of horse-shoeing, that known as the Goodenough system seems alone to be founded upon correct principles. The frog must be preserved, or eventually the foot will be ruined. The light of reason is beginning, in this respect, to slowly dawn upon the rising generation of blacksmiths. Let us hope, for the horse's sake, that that instrument of torture, the old bar shoe, may soon be brought to mind only with memories of the Inquisition.—*Scientific American*.

Parasites in Sheep.

We described in a recent number, the fatal character of this disease among sheep, and have had a visit since from one of our subscribers in Virginia, who has had it among a very fine flock of Cotswolds, part of which were from Canada, and he thinks, may have brought the disease with them. How it is propagated through a flock of sheep is not known, as it is not strictly speaking contagious, as the term is usually understood. As the sheep affected run greatly at the nostrils and have a cough, there is a possibility of some of the parasites being voided in this way on to the pasture and taken in by other sheep. Symptoms of the disease appear a considerable time before it proves fatal. They cease thriving, get very poor and weak, draw their feet under them close together, carry their head low and sometimes fall down from very weakness.

The remedy, and the only one, is turpentine in strong doses, about a teaspoonful at a time. On a post mortem, the worms are found first in the lungs and afterwards in the intestines, are about two to three inches long, and increase very rapidly. His losses by the parasites he estimates at \$1000. *Practical Farmer*.

Scab in Sheep.

The *Practical Farmer* on this subject says:—We have found strong tobacco water the best and most effectual remedy for scab. Some years ago, we imported from England a lot of Leicesters, which on the voyage here had been located right under the chicken coop. They received all the droppings on their backs, from which there was no escape, and of course reached us covered with scab. We had them sheared immediately and lifted each one separately in a large tub and poured the tobacco water over them at three or four different times. They were cured completely. The same sheep had foot rot, which we cured with butyr of antimony.

The following is from the *Prairie Farmer*:—“The following is one way of treating scab in sheep: Take of flour of sulphur, one pound; Venice turpentine, four ounces; rancid lard, two pounds; strong mercurial ointment, four ounces; mix well together. The mode of applying this ointment is as follows: Begin at the head of the sheep, and proceeding from between the ears along the back to the end of the tail, divide the wool in a furrow till the skin can be touched and let a finger slightly dipped in the ointment be drawn along the bottom of the furrow. From this furrow similar ones must be drawn along the shoulders and thighs to the legs, as far as the wool extends. As if much infected, two or more furrows should be drawn along each side parallel with that on the back; and one down each side before the hind and fore legs. This ointment should be used in very cold or wet weather. Make a new sheep fold, and destroy the old by burning it, mangers and all.—Cleanliness above all things is necessary. Such part of fences, and the posts where the sheep have been in the habit of rubbing themselves against should be burned.”

BOTS.—The *American Agriculturist* says—Bots are larvæ of the horse gad-fly (*Æstrus equus*), and are in a condition exactly equivalent to that of the caterpillar of a moth or butterfly. They therefore can not breed or reproduce themselves in the stomach of a horse, being imperfect insects and incapable of breeding. It is easier to prevent their presence in the horse's stomach than to get rid of them. If the yellow nits or eggs which may be seen upon horses' knees or shoulders in July or August are washed off with warm water, or scraped off with the edge of a knife, the horse can not lick them off and carry them to their temporary resting-place. Every farmer should learn the natural history of the insects and animals with which he comes in contact; then he would know how to treat them with propriety.

USEFUL RECIPES.

CASTING THE CALF BED.—The *Live Stock Journal* gives the following as the best treatment: Inversion of the uterus, commonly known as falling down of the calf bed, may be prevented by applying a truss immediately after the calf is born. If you have no truss at hand, you will have to elevate the hind extremities, which can be done by raising the litter behind or raising the floor. In returning the uterus, care should be taken not to allow any dust, straw or any offending body to adhere to it. After it has been returned administer tinct. opium 1 oz.

TREATMENT FOR CURB.—The same journal says:—

Clip the hair from off the entire surface of the enlargement, and then apply a mixture of hog's lard 4 dr.; cantharides 1 dr.; biniodide of mercury, 1 dr.; spread a thin coating of the above over the part and rub in for fifteen minutes, then tie the animal so as he may not bite or rub the curb, at the same time give as much rest as possible. On the third or fourth day apply a little lard or sweet oil if a nice scab has formed.

FISTULA OR POLE EVIL.—The *Tribune* gives the following:—Forty grains iodine, 20 drops oil cedar, 30 drops oil sassafras, 50 drops spirits turpentine, 1 ounce gum euphorbium, ½ ounce Spanish flies; cut the iodine with alcohol; mix all together: then stir in hog's lard to the desired thickness. Then cut away the hair over the swelling with sharp scissors for some inches around, even if it has gone into a running ulcer, and spread the salve with a small mop.—Every second or third day wash off clean with strong soapsuds, and repeat the application. A permanent cure may be expected in a short time, unless the treatment has been too long deferred.

KILLING LICE ON CATTLE.—A correspondent of the *Western Rural* says:—“My remedy which has been effectual, is to give sulphur, salt, and wheat bran, mixed, equal parts, three times a week on warm days. For horses and colts, I add saltpeter.”

BUTTERMILK AND SCURVY.—The *Colorado Agriculturist* says: A correspondent informs us that he finds buttermilk to be an almost unfailing cure for scurvy in hogs. To prove the fact, among other cases which have come under his notice, he says he owns several pigs which, a few weeks since, were suffering terribly from the effects of the disease, and that a speedy cure was effected by merely pouring the buttermilk over them a few times in the pen. Readers will do well to remember this simple remedy.

SOWS EATING PIGS.—A Veterinarian in the *Prairie Farmer* thus advises a correspondent: Watch the hog the first few days after the pigs are born, and if she evinces a desire to eat her pigs, give her an emetic composed of tartar emetic, three grains; powdered ipecacuanha and powdered white hellebore of each eight grains; mix and throw dry into the mouth of the hog.

GARGET REMEDY.—Dr. Bronson of Michigan, writes the *New York Tribune*:—My remedy for garget is one tablespoonful of saltpeter every other day for three days, then skip a few days, and feed again if a cure is not effected. I think three doses will heal the most obstinate case. By-the-way, any person who keeps cows, should feed to each the above dose of saltpeter, once in two weeks, through the milking season, and there will be no complaint of garget.

LADIES DEPARTMENT.

A CHAT WITH THE LADIES FOR JULY.

BY PATUXENT PLANTER.

"Sweet is the breath of morn, her rising sweet
With charms of earliest birds."

In search of much treasured health, only properly appreciated when it is lost, I embraced the offer of comfortable carriages and fast horses, kindly tendered by my hospitable friends in the old city of *Georgetown*, to see the beautiful surroundings of the town, and from its lofty heights to enjoy the panorama which is spread out with the silver lining of the famed Potomac, skirting the green hills of Virginia, in the early morn or fading evening, during the mild days of the beautiful June just passed. In doing so, the rural scenes I met, were intended to be painted by my own rude pencil, and hints of useful domestic economy enforced in my talk with my lady friends, but though I put it off from day to day, to acquire the physical and mental ability to enable me to do so, nature refused my urgent desires, and I have to ask my indulgent fair readers to accept in lieu thereof the homely but life-like picture of a rural Poet, which effusion comes luckily to my mind.

THE FARM.

* * * *

And now, at nature's cheerful voice,
The hills, and vales, and woods rejoice,
The lark ascends the skies;
And soon the cock's shrill notes alarm
The sleeping people at the farm,
And bids them arise.
Then to the dairy's cool retreat,
The busy maids together meet;
The careful mistress sees,
Some tend with skilful hand the churns,
Where the thick cream to butter turns,
And some the curdling cheese.
And now comes Thomas from the house,
With well known cry to call the cows,
Still sleeping on the plain;
They quickly rising, one and all,
Obedient to the daily call
Wind slowly through the lane.
And see the rosy milkmaid now,
Seated beside the horned cow,
With milking-stool and pail;
The patient cow, with dappled side,
Stands still, unless to lash her side
With her convenient tail.
And then the poultry, (Mary's charge,)
Must all be fed, and let at large,
To roam about again;
Wide open swings the great barn door,
And out the hungry creatures pour,
To pick the scattered grain.
Forth plodding to the heavy plough,
The sun-burnt labourer hastens now,
To guide with skilful arm;
Thus all is industry around,
No idle hand is ever found,
Within the busy farm.

I have the ability to add that the dairy and the poultry need much care this month. Some fruits are in season by drying, canning and preserving. Secure in time a cherry stoner, apple and peach peeler and slicer, also a good fruit-dryer, it will well repay expense the first month it is used. Currant Jellies, and Currant and Gooseberry wines can be made this month, also Blackberries put up for winter use and sale, and manufactured into that delicious drink—so wholesome and such a help to temperance—Blackberry wine!

Greenfox grape jelly can be made now, and the whole grape made into a lovely and luscious preserve.

JAMS.—Molly writes the *Germantown Telegraph*, that it is not generally known that boiling fruit a long time, and *skimming it well, without the sugar and without a cover* to the preserving pan, is a very economical and excellent way—economical because the bulk of the scum rises from the fruit, and not from sugar, if the latter is good; and boiling it without a cover allows the evaporation of the watery particles therefrom; the preserves keep firm and well-flavored. The proportions are, three-quarters of a pound of sugar to a pound of fruit. Jam made in this way of currants, strawberries, raspberries or gooseberries, is excellent. The best jam I know of is made of an equal quantity of *gooseberries and raspberries*. Some made by us last year of this half-and-half mixture, was preferred to all others.

GRAPE WINE.—A correspondent in the *Germantown Telegraph*, gives the following recipe for producing excellent wine:

Five Gallons Wine. Express the juice from twenty pounds grapes, rinse the pulp and skins in as much water as will cover them, mash them and strain through a coarse cloth, add this to the juice and put in two pounds of brown sugar to each gallon; when the sugar is dissolved, pour the whole into a keg, having the bung open, and let it stand where the temperature will be about 70 degrees until fermentation ceases; then bung tight, and let it rest for a month to settle, when it should be drawn off quietly, the keg well-washed, and the wine returned to it, adding one pound good raisins; and if the wine does not seem sweet enough two pounds sugar may be added to the whole. The necessity of doing this depends upon the kind and quality of the grapes.

The wine should remain until the keg is wanted the next season, when it may be bottled for use.

CURRENT JELLY.—Scald the currants, then press, strain and measure them. Put the juice on to boil ten minutes; pour it while boiling over the sugar, allowing a pound to every pint of juice.

TO KEEP AIR FROM WINE OR CIDER DURING FERMENTATION.—The *Boston Journal of Chemistry* says, that a tin tube made like a siphon, driven into the vent of a barrel of wine or cider, and the other end inserted into a vial of water, will prevent the air from entering the barrel while the gas escapes through the water. Make the barrel otherwise tight. When the cider or wine is done working, the water in the bottle will cease bubbling. It requires no filling up, as there is no loss.